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ABSTRACT

This document contains brief descriptions of the elementary, junior high/middle school programs and the approved high school course titles which are provided in Indiana's official Administrative Code Handbook for schools. These descriptions were officially adopted by the Indiana Board of Education in July, 1984. Subject areas included are art, foreign language, health, physical education and safety, language arts, mathematics, music, science, and social studies. Also included in this document are the descriptions for the approved multidiscipinary courses. These descriptions were developed to serve as models for school systems in developing curricula responsive to unique local needs. The guide does not provide extensive details on each grade level program or each high school course. Decisions related to curriculum assessment, selection, implementation and evaluation are left to each school system. (TW)

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Course and Curriculum Area Descriptions for Indiana Schools

SE 048 669

Center for School Improvement
and Perforamnce
Indiana Department of Education
Room 229, State House
Indianapolis, IN 46204-2798

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COURSE AND CURRICULUM AREA DESCRIPTIONS FOR INDIANA SCHOOLS

Center for School Improvement
and Performance
Indiana Department of Education
Room 229, State House
Indianapolis, IN 46204-2798

INTRODUCTION

These descriptions, which were officially adopted by the State Board of Education in July, 1984, contain brief statements of the elementary, junior high/middle school programs and approved high school course titles which are found in the Indiana Administrative Code Handbook [Rule C-1, Sec. 5(d)(1 through 12]. Subject areas included are art, foreign language, health, physical education and safety, language arts, mathematics, music, practical arts/ industrial technology education, science, social studies, and vocational-technical. Also included in this document are the descriptions for the approved multidisciplinary courses.

These descriptions are to serve as models for school corporations in developing curricula responsive to unique local needs. The document does not provide extensive details on each grade level program or each high school course, nor does it list an "ideal" curriculum for all schools to emulate. Decisions related to curriculum assessment, selection, implementation and evaluation are left to each school corporation. To quote from Rule C-1, Sec. 5(f), "The length of any specific course is locally determined unless restricted by other rules of the commission; however, courses listed in Rule C-1, Sec. 5(d) [510 IAC 4-2-5(d)] are generally considered one (1) or two (2) semester courses." A course with a level designation, e.g., Level I, Level II, Level III, is the equivalent of one year's instruction. The number preceding each curriculum area or course title is a computer access code and is at this time only for use by the Indiana Department of Education staff.

Descriptions for this publication were developed by subject area consultants in the Indiana Department of Education's Divisions of Curriculum, Reading Effectiveness, and Vocational Education, with advice from local educators, business and industry representatives, and Indiana citizens as well as local organizations.

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*The Practical Arts/ Industrial Technology Education and the Vocational-Technical course descriptions will be published separately.

Multidisciplinary

(d) Approved High School Courses

(1) MULTIDSCIPLINARY*

Multidisciplinary Courses

110-05 Basic Skills Development

Basic Skills Development, a multidisciplinary course, should provide students continuing opportunities to develop the basic skills of reading, writing, listening, speaking, mathematical computation, and problem-solving, which are essential for high school course work achievement. Determination of the basic skills to be emphasized in this course should be based on the corrective development provisions of either the Educational Improvement Program (Rule C-1, Sec. 1(c)(7)) [510 IAC 4-2-1(c)(7)] or the Individualized Education Program (Rule S-1, Sec. 1(m)) [510 IAC 7-1-1(m)]. Skills selected for developmental work should provide students with the ability to continue to learn in a range of different life situations.

110-10 Cadet Teaching

Cadet Teaching, a multidisciplinary course, should provide 11th or 12th grade students with an organized exploratory teaching experience in grades kindergarten (K) through nine (9). The teaching experience should be pre-planned by the high school *Cadet Teaching* sponsor-teacher and the cooperating teacher(s) so that the cadet teachers are provided experience with students in one or more classes regularly taught by licensed teachers interested in providing prospective teachers with pre-training experiences. The sponsor-teacher should be available to monitor the students' cadet teaching experiences to insure that the students are provided a sequence of experiences relating to classroom organization, management, and instruction. The course should provide a balance of classwork relating to teaching and class management, observation of teachers, and instructional experiences. Evaluation should be based upon the cadet teachers' cooperation, day-to-day practical performance, and classwork, including the cadets' potential ability to teach. To give students the essential background information concerning the teaching profession, and the nature of learning, the sponsor-teacher and cooperating teacher should assign study topics and background readings which will add meaning to the students' classroom experiences. Written reports of observations and experiences should be part of the cadet teachers' assignments. The total workload of the cadet teaching course should be comparable to those for other subjects in the high school curriculum. The total credits that any student can accumulate in cadet teaching should be limited to four, with not more than one being earned during any given semester.

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* For establishing majors and minors, multidisciplinary courses shall be applied to an area of study to which a significant portion of the course content is closely related.

110-15 Computer Applications

Computer Applications, a multidisciplinary course, should be designed to give students experiences in utilizing prepackaged programs to perform tasks drawn from one or more curricular areas.

110-20 Computer Literacy

Computer Literacy, a multidisciplinary course, should be designed to familiarize students with the multiplicity of ways computers are used in today's society and should introduce students to their potential future uses. The course should introduce students to methods and strategies for personally interfacing with computers and their peripherals, culminating in the students successfully using prepackaged computer programs to accomplish specified tasks. The emphasis of this course should be to develop positive attitudes toward the personal use of computer technology.

110-25 Computer Programming I

Computer Programming I, a multidisciplinary course, should be focused on developing an ability to use BASIC or another computer language to solve or resolve a limited number of specified problems drawn from one or more curricular areas.

110-30 Computer Programming II

Computer Programming II, a multidisciplinary course, should be designed to provide opportunities to explore the capabilities of the computer in solving or resolving a variety of complex problems drawn from one or more curricular areas.

110-35 Consumer/Economic Education

Consumer/Economic Education, a multidisciplinary course, should provide the concepts and analytical tools necessary for understanding the functioning of the economic, political, and social systems and the ways in which they affect and are affected by the individual, the family, and other groups. Opportunities should be provided to acquire consumer management and decision-making tools in order to understand the responsibilities and rights of individuals as consumers, producers, and citizens. This course should provide experience in utilizing the communication processes among consumers, producers, governments, and other information sources. Students should be prepared to participate effectively in the marketplace as rational decision makers.

110-45 Environmental Studies

The multidisciplinary *Environmental Studies* course should provide students opportunities to utilize several disciplines in examining eco-systems from a variety of human viewpoints. This course should foster an awareness of aesthetics and the ecological, economic, social, and political interdependence in urban and rural areas. It should introduce students to the knowledge, values, attitudes, commitments, and skills needed to make decisions and to choose personal actions which will contribute to intelligent resource management. The course should provide the students with the skills needed to investigate the ecological effects of the uses of energy, water, air, soils, minerals, wildlife and other natural resources. Field trips and community investigations should be utilized to provide examples of practical applications of good resource management. Topics could include identifying and monitoring the disposal of hazardous wastes, acid rain, land use practices including wilderness areas, water and solid waste treatment, transportation systems, human population demands on the land, and the impact of these factors on the quality of life and the culture of the area.

110-50 Humanities

The multidisciplinary *Humanities* course should be designed to include instruction which will provide the students opportunities to study certain masterpieces of literature, music, the visual arts, and philosophy. Emphasis should be placed upon the development of an understanding of the analysis and the distinctive differences between the various art forms and between the styles and expressions of these works of art. The course should include components which will cultivate an historical sense by which an artistic or intellectual product can be identified as part of the total development of civilization. As a result of this study, students should broaden their powers of understanding and feeling for the humanities; have a broad intellectual tolerance for the many ideas which the human race has generated; and develop a broad aesthetic taste for excellence in every genre and style of art.

110-55 Junior Reserve Officer Training Corps

Junior Reserve Officer Training Corps, a multidisciplinary course, should be designed to develop citizenship and patriotism, self-discipline, reliance and leadership, decision-making, communications, problem-solving, and physical fitness. The course content and experiences should enable the students to understand the role of the military in support of national objectives and to become familiar with basic military knowledge, benefits, and requirements. Topics to be included in the course are military history, ROTC in the military, substance abuse, map reading, marksmanship and safety, military drill, field activities, reserve components, and first aid and hygiene. Opportunities should be provided to explore the qualities and traits of courage, self-sacrifice, and integrity. *Junior Reserve Officer Training Corps* programs must be approved by and meet the requirements of the appropriate military organization.

110-60 Related Arts

Related Arts, a multidisciplinary course, should provide students with opportunities to understand and to participate in all of the arts, including, but not limited to visual art, music, dance, and theater. Students should be introduced to the theorectical bases of the art forms involved and should learn about the artistic, historical, and cultural contexts in which the art forms have existed.

110-65 Vocational/Career Information

Vocational/Career Information, a multidisciplinary course, should provide students with educational experiences that enable them to learn about themselves and about various occupations and careers, including non-traditional career choices. The course should also provide students with an awareness of the type of occupational preparation or training needed for various occupations and careers. Other student goals might include development of employability skills, understanding of the economic process and acquisition of decision-making and planning skills. Opportunities for field trips, job observation, internships, mock interviews, guest speakers, resume development, and career related testing could be provided. The course should be both informative and exploratory in nature.

Language Arts

(2) LANGUAGE ARTS

Elementary 010-05

LANGUAGE USAGE AND COMPOSITION

Kindergarten - Language Experiences 000-05, 000-10

Kindergarten students should be provided with opportunities to develop an already considerable language facility. These opportunities should include: pre-reading activities using sound-to-symbol principles; writing activities which facilitate muscular control and visual activity; listening activities which develop concentration and attention span; speaking activities which develop sentence sense, logical word order, and self-confidence; and visual activities which develop eye/hand coordination, classifying, and word recognition using visual symbols.

Grades 1-3 010-05, 020-05, 030-05

Language usage and composition in the primary grades should provide instruction designed to enhance freedom and spontaneity in oral expression, develop sentence and paragraph generation skills, establish vocabulary skills, and develop skill in listening thoughtfully.

To accomplish the goals in oral expression, instruction should provide study and practice in the following activities: participating in choral speaking; memorizing poems; telling stories to the group; planning dramatizations; sharing books with others; composing original stories and poems; expressing ideas gained from reading in/seeing artistic media; and other activities that encourage oral expression appropriate for the specific instructional level.

To accomplish goals in composition, instruction should provide study and practice in the following skills: using simple punctuation; using standard capitalization; using correct manuscript format for specific writing tasks; arranging ideas in sequential order; generating complete and grammatically correct sentences of varying lengths, using the simple parts of speech; grouping sentences having similar ideas into coherent paragraphs; and determining audience and purpose for a specific writing task.

To accomplish the goals in vocabulary development, instruction should provide practice in word recognition skills as well as the use of context clues, multiple meanings, synonyms, antonyms, homonyms, homographs, and structural analysis for meaning.

To accomplish the goals in listening, instruction should provide study and practice in the following skills: participating in classroom listening situations and demonstrating concentration, attention span, and responding with relevant questions and/or contributions appropriate for the instructional level; following individual and group directions; following sequential directions; and transferring direction given for one task to a similar task.

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Grades 4-6 040-05, 050-05, 060-05

Language usage and composition in the intermediate grades should provide instruction designed to further encourage freedom and spontaneity of oral expression; reinforce and expand sentence and paragraph generation skills; reinforce and expand vocabulary skills; and further develop skills in listening thoughtfully.

To accomplish the goals in oral expression, instruction should provide study and practice in the following skills: participating in choral speaking; memorizing poems; telling stories to a group; planning dramatizations; sharing books with others; composing original stories and poems; expressing ideas gained from reading in/seeing artistic media; and other activities that encourage oral expression appropriate for the specific instructional level.

To accomplish the goals in composition, instruction should provide study and practice in the following skills: using simple and complex punctuation; using standard capitalization; using correct manuscript format of specific writing tasks; arranging ideas in sequential order; generating complete and grammatically correct sentences of varying lengths, using all the parts of speech; grouping sentences having similar ideas into coherent paragraphs; determining audience and purpose for a specific writing task; proofreading for correct spelling, capitalization, punctuation, and sentence completeness; constructing an outline to assist in the organization of more complex writing tasks; and taking notes from written materials to assist in logical and coherent paragraph development.

To accomplish the goals in vocabulary development, instruction should provide practice in word recognition skills as well as the use of context clues, multiple meanings, synonyms, antonyms, homonyms, homographs, and structural analysis for meaning.

To accomplish the goals in listening, instruction should include study and paractice in the following skills: participating in classroom listening situations and demonstrating concentration, attention span, and responding with relevant questions and/or contributions appropriate for the instructional level; following individual and group directions; following sequential directions; and transferring directions given for one task to a similar task.

SPELLING

Grades 1-3 010-05,020-05,030-05

Spelling instruction in the primary grades should provide for sequential learning experiences designed to develop students' abilities to understand the components of spelling. Spelling instruction should provide activities to give students practice in using the alphabet to form words. The spelling program should introduce students to lists of words according to instructional levels and content areas. Students progressing through the primary grades should utilize sound-to-symbol principles, structural analysis, word building, and contextual principles. Special techniques for learning to spell words that do not follow English linguistic patterns should also be taught. Learning experiences should be provided for developing the dictionary skills of alphabetizing, syllabification, pronunciation, and definition. Any rules that appear in spelling textbooks should be clearly stated, be easily understood by teachers and students, and have a definite rationale. The spelling program should be appraised in a continuous, evaluative manner by providing testing situations of self-checking, proofreading, and dictionary skills.

Grades 4-6 040-05, 050-05, 060-05

Spelling instruction in the intermediate grades should continue to provide for sequential learning experiences to develop students' abilities to understand the components of spelling. The spelling program should continue to introduce students to lists of words according to instructional levels and content areas. Students progressing through the intermediate grades should further utilize structural analysis, word building, and contextual principles. Special techniques for learning to spell words that do not follow linguistic patterns should also be taught. Learning experiences should be provided for further reinforcing the dictionary skills of alphabetizing, syllabification, pronunciation, and definition. Any rules that appear in spelling textbooks should be clearly stated, be easily understood by teachers and students, and have a definite rationale. The spelling program should be appraised in a continuous, evaluative manner by providing testing situations of self-checking, proofreading, and dictionary skills.

HANDWRITING

Grades 1-3 010-05, 020-05, 030-05

Handwriting instruction in the primary grades should provide the students with materials that include models for legible, graphic representation of individual letters and letters combined to form words. Instruction should allow for individualization, reflecting increased muscular control and visual acuity. Accurate models should provide students the means for producing legible handwriting that can be used in all areas of the curriculum. Materials should provide repetitive writing experiences in order for students to attain proficiency through practice. Instruction should include the transition from the manuscript (printing) to cursive handwriting style within the primary grades. Handwriting experiences should be integrated as much as possible with composition activities, and designed to meet the needs of the students. Materials should also provide means for students to evaluate their own efforts so that they may maintain progress in handwriting skill development.

Grades 4-6 040-05, 050-05, 060-05

Handwriting instruction in the intermediate grades should continue to provide the students with materials that include accurate models for producing legible handwriting that can be used in all areas of the curriculum. Instruction should allow for individualization, reflecting muscular control and visual acuity. Materials should continue to provide repetitive writing experiences in order for students to attain proficiency through practice. Handwriting activities should meet the needs of the students. Materials should also provide means for students to evaluate their own efforts so that they may maintain continuous progress in handwriting skill development.

READING

Grades 1-3 010-05, 020-05, 030-05

Reading instruction in the primary grades should begin by combining several approaches to word recognition instruction. Some of these approaches may include structural analysis and/or phonics as well as other appropriate strategies. These beginning approaches should be meaning-centered with the instructional emphasis placed upon comprehension initiated at a listening level. Instruction using oral and written directions should incorporate all language skills. To facilitate affective development, texts should present stories and illustrations which represent interests and experiences usually associated with this age and instructional level. Instruction should progress to aid the student in developing skills to improve understanding of story meanings which include identification of main ideas, details, sequence, and drawing conclusions. Emphasis should be placed on helping the learners enlarge their reading vocabularies through extended practice in context. Instruction in alphabetizing should be initiated as a prerequisite to dictionary and library skills development. Materials should be included to expand knowledge of dictionary and library skills and reference materials through independent assignments or activities as the learner progresses. The final stage of the primary grades should reinforce word recognition skills, vocabulary development, and aid the student in establishing independence in reading unfamiliar words through review and application. Materials should be included to develop comprehension skills through guided interpretation and analysis. Tests presented at this level should become more extensive in content-related selections to allow for integration of reading skills into the content areas. A variety of topics should be included to promote an enjoyment of reading.

Grades 4-6 040-05, 050-05, 060-05

Reading instruction in the intermediate grades should provide opportunities for review of word recognition skills, vocabulary skills, comprehension, and study skills introduced at the previous levels. Instruction should provide for the expansion of vocabulary skills and integration of reading skills into the content areas. Materials that lend themselves to promoting independence in the acquisition of all these skills should be utilized. Instructional materials should promote not only literal comprehension and study skills introduced at the previous levels. Instruction should provide for the expansion of vocabulary skills and integration of reading skills into the content areas. Materials that lend themselves to promoting independence in the acquisition of all these skills should be utilized. Instructional materials should promote not only literal comprehension skills but also those comprehension skills at the inferential and critical levels. Critical thinking/reading skills, recognizing propaganda techniques, and comparing information should be stressed. Reading materials should help students understand sequence of events and the use of supporting details to develop the main idea of a parapraph. Texts should include non-fiction as well as fiction and promote awareness of the author's point of view along with the understanding of different literary and character portrayal techniques. Texts at the final stage of the intermediate level should present opportunities to develop competence in using a dictionary, glossary, and index to locate information with a minimum of assistance. Stories and articles should encourage further independent reading.

LANGUAGE USAGE AND COMPOSITION

Grades 7-8 070-05, 080-05

Language and Composition should provide a study and practice in the following skills: use of grammatical structures and mechanical rules to generate sentences and paragraphs appropriate to instructional level; concise organization and logical expression of ideas in speaking and writing; vocabulary development which includes usage of new words in various writing tasks; and listening situations which require maturity of response appropriate to instructional level. Language instruction may provide further practice in the more sophisticated skills of creative writing, sequential oral presentation for the secondary language arts curriculum.

070-05, 080-05

HANDWRITING

Handwriting instruction at this level should be integrated with composition activities so that students may develop legible, individual styles.

070-05, 080-05

SPELLING

Spelling at the middle/junior high school level should reinforce and expand the skills taught at the elementary level, with special emphasis on word meaning and use in oral and written language. Proofreading techniques and dictionary skills should continue to be stressed on an increasingly sophisticated basis. Materials should offer students opportunities to improve their spelling abilities through study and practice, self-checking, use of words in written and spoken contexts, and special techniques for learning to spell words that do not follow English linguistic patterns.

070-05, 080-05

READING

Grade 7

At the seventh grade level, basic reading skills should be further developed with more sophisticated materials and with increased emphasis on content area usage. Texts should encourage students to pursue independent and recreational reading through exposure to an increased variety of content and literary forms. Materials should include activities for further development of oral and written communication skills. Proficiency in study skills becomes more significant as research and reporting are required. Texts should incorporate activities to develop comprehension skills such as drawing conclusions, inferences, and recognizing subtle meanings. Word recognition skills and vocabulary development should be relevant to the instructional level and content area needs. Structural analysis and multiple word meanings should be stressed.

Grade 8

At the eight grade level, instruction should promote independent reading skills, including an appreciation of reading. Attention should be given to the development of more sophisticated critical and creative thinking skills. Materials should address content area reading needs. Texts should provide opportunities for the student to diversify his/her reading rate according to purposes designated for reading selections. Reference and study skills should be maintained and strengthened through application. Materials should extend literary and characterization techniques previously introduced. Building upon acquired skills, texts for this instructional level should reflect the accumulated reading experiences of the previous levels.

*Secondary**

GENERAL ENGLISH

English 9 121-05

English 9 is a course that should integrate language studies, composition, and literature. Students should be introduced to a variety of literary genres (types) and should be required to express their impressions of the various literary works orally as well as in writing. A variety of media should be used, so that students may compare visual presentations and interpretations of literature with the original sources. Students should be able to distinguish the literary techniques used in each genre and should be able to determine an author's purpose in choice of genre. Teachers should communicate to students the pleasure of reading in order to more fully understand the human condition.

Students should be able to generate paragraphs and short compositions which indicate an awareness of audience and purpose as well as skill in coherent, lineal development and logical thought. It is strongly recommended that composition and grammar be integrated with literature studies so that a balanced curriculum may be achieved.

English 10 121-10

English 10 is a course that should integrate language studies, composition, and literature. It should provide a review of concepts and skills presented in *English 9*, as well as instruction in sequentially sophisticated literature encompassing a variety of literary genres. Students should be required to express their impressions of the various literary works orally as well as in writing. A variety of media should be used so that students may compare visual presentations and interpretations of literature with the original sources. Students should be able to distinguish the literary techniques used in each genre and should be able to determine an author's purpose in choice of genre. Teachers should communicate to students the pleasure of reading in order to more fully understand the human condition.

Students should be able to generate full compositions which indicate an awareness of audience and purpose as well as skill in coherent, lineal development and logical thought. It is strongly recommended that composition and grammar be integrated with literature studies so that a balanced curriculum may be achieved.

English 11 121-15

English 11 is a course that should present a balance of language studies, composition, and literature. It should provide a review of concepts and skills presented in *English 10*, as well as instruction in sequentially sophisticated literature encompassing a variety of literary genres. *English 11* is generally limited to the study of American literature (see description of *American Literature*), but this is not required. Students should be required to express their impressions of the various literary works orally as well as in writing. A variety of media should be used, so that students may compare visual presentations and interpretations of literature with the original sources. Students should be able to distinguish the literary techniques used in each genre and should be able to determine an author's purpose in choice of genre. Teachers should communicate to students the pleasure of reading in order to more fully understand the human condition.

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*The English Language Arts requirement includes a balance of writing, reading, listening, speaking, grammar, literature, and media studies.

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Students should be able to generate compositions which indicate an awareness of audience and purpose as well as skills in coherent, lineal development and logical thought. In order to more fully develop the writing skills taught in grades 9 and 10, it is suggested that a significant portion of the literature testing be in essay form. Research skills may be taught at this level, and an expository/argumentative paper with a clearly stated thesis and logical support for the thesis may be required, perhaps as an interdisciplinary project with U.S. history. It is strongly recommended that composition and grammar be integrated with literature studies so that a balanced curriculum may be achieved.

English 12 121-20

English 12 is a course that should integrate language studies, composition, and literature. It should provide a review of concepts and skills presented in *English 11*, as well as instruction in sequentially sophisticated literature encompassing a variety of literary genres. *English 12* is generally limited to the study of British and/or world literature (see appropriate course descriptions), but this is not required. *English 12* may be either a terminal course for the non-college bound student or a college preparatory course. Students should be required to express their impressions of the various literary works orally as well as in writing. A variety of media should be used, so that students may compare visual presentations and interpretations of literature with the original sources. Students should be able to distinguish the literary techniques used in each genre and should be able to determine an author's purpose in choice of genre. Teachers should communicate to students the pleasure of reading in order to more fully understand the human condition.

Students should be able to generate compositions which indicate an awareness of audience and purpose as well as skill in coherent, lineal development and logical thought. In order to more fully develop the writing skills taught in the previous three grades, it is suggested that a significant portion of the literature testing be in essay form. For students who are not college-bound, it is suggested that language studies and composition practice should review skills taught in the previous three grades and should be designed for practical application immediately following high school graduation. Research skills may be taught/extended at this level and an expository/argumentative paper with a clearly stated thesis and logical support for the thesis may be required. It is strongly recommended that composition and grammar be integrated with literature studies so that a balanced curriculum may be achieved.

121-25 Remedial English

Remedial English should provide study and significant practice in communication fundamentals: writing, speaking, listening, and reading. Emphasis should be placed on basic English sentence patterns, paragraph development, mechanics, vocabulary development, and language usage. The focus of the course should be on the improvement of fluency in writing and speaking. A variety of instructional techniques should be used, individualized as much as possible, to meet students' needs. Reading materials should be of an appropriate level so as to retain the interest of the students, but should not be of intimidating difficulty. Teachers should be aware that students with low language ability often have a negative self-concept, so efforts should be made to heighten self-esteem with improved language facility.

121-30 English as a Second Language

English as a Second Language should provide students whose native language (first language) is not English with instruction in English which would improve their proficiency in all four skills: listening, speaking, reading, and writing. Emphasis should be placed on improving English language skills so that the student can function well within the school and within an English-speaking society.

LITERARY STUDIES

122-05 American Literature

American Literature should provide a survey of the literature produced in the United States, including the pre-Revolutionary War era. Students should study representative works of various genres which reflect the American experience in both the literary and historical contexts. It is suggested that representative works of American Nobel prize winners be considered, since there have been many in a relatively short time; this number reflects the quality of the contribution of American literature to the literature of the world.

122-10 Biblical Literature

Biblical Literature should provide a survey of the Bible as a source of a wide variety of both poetry and prose. The course should provide a basis for understanding the allusions to the Bible in both classical and modern literature.

122-15 Biographies

Biographies should provide a study of outstanding examples of biographical literature and the conventions and techniques of the biographical writer. The relationship between biographer and subject should be examined so as to determine authorial reliability.

122-20 Classical Literature

Classical Literature should provide a survey of Greek and Roman literature, which serves as a major influence on modern literature. The course may be organized to concentrate on mythology, or it may include a variety of genres, such as drama, poetry, and prose.

122-25 Contemporary Literature

Contemporary Literature should provide a survey of the literature produced in the period from approximately 1950 to the present time. The course may be organized chronologically or thematically; it may also be organized to concentrate on a specific author or authors of the period, or on a specific literary genre.

122-30 Dramatic Literature

Dramatic Literature should provide a study of plays as literary art, with particular focus on dramatic conventions which differentiate drama from other genres. The history of drama as entertainment as well as literature should be considered, including representative works of important playwrights, dramatic/literary movements, and the developments in stagecraft and acting that contribute to drama as both a literary genre and a visual art form.

122-35 English Literature

English Literature should provide a survey of literature produced in the British Isles. The course should provide the study of representative works of major authors of various historical periods, literary movements, and intellectual trends. The course should also provide an examination of the contributions to specific literary genres such as poetry, drama, and the novel of authors who live/lived in the British Isles.

122-40 Ethnic Literature

Ethnic Literature should provide a study of literature produced by writers representing various ethnic cultures in the United States. Varied ethnic experiences, themes, and ideas should be considered, as well as the contributions of ethnic authors to the body of American literature. Literature studied in the course should be chosen on the basis of literary merit rather than ethnicity itself.

122-45 Film Literature

Film Literature should provide a study which encompasses the diversified ideas and concepts which interact with one another when written literature is transferred to film, or when a work of literary art is originally conceived for film presentation. The course may be developed to include a history of film as a medium of literary interpretation, visual interpretations of literary techniques, auditory language effects, and the impact of film on the way in which people perceive the human condition.

122-50 Genres of Literature

Genres of Literature should provide a study of the techniques and conventions of the various literary genres. Genres to be considered should include: poetry, drama, the novel, the short story, and non-fiction, as well as examples of applicable sub-genres, such as the essay and biography. The literary applications of the concept of genre should be studied, and students should be able to determine authorial purpose in choice of genre through the examination of representative works of each. The course may also be organized to concentrate on a specific literary genre.

122-55 Indiana Literature

Indiana Literature should provide a survey of the literature produced by writers who were born in or lived a majority of their lives in Indiana. The course should provide the study of representative works of authors of various historical periods and literary movements, as well as literature which reflects unique aspects of Indiana culture. The course should also provide an examination of the contributions of Indiana authors to specific genres and to the body of American literature.

122-60 Literary Movements

Literary Movements should provide a study of the literature produced in the Middle Ages, the Renaissance, the Age of Reason, and the periods of Romanticism, Realism, Naturalism, Modernism, and post-Modernism. The course should also provide an examination of the connection between intellectual/historical trends and specific literary movements. The course may also be organized to concentrate on a specific literary movement.

122-65 Modern Literature

Modern Literature should provide a survey of the literature produced in the period from approximately 1900 to approximately 1950. The course may be organized chronologically or thematically; it may also be organized to concentrate study on a specific author or authors of the period, or on a specific literary genre.

122-70 Novels

Novels should provide a study of the history of the novel as a literary form, as well as the elements, techniques, and conventions that distinguish the novel from other literary genres. The course may be organized historically, thematically, or by author, and should include novels of appropriate length and complexity for the level taught. Reading novels for pleasure should be stressed.

122-75 Poetry

Poetry should provide a study of the history of poetry as a literary form from the earliest traveling minstrels to the contemporary modernists. Representative examples of the major types of poetry - epic, lyric, and dramatic - as well as variations of the major types should be studied. Students should be familiar with the numerous poetic structures, devices, and themes which differentiate one type of poetry from another. A poetry course may also be organized to concentrate on the work of one poet or a group of poets.

122-80 Short Stories

Short Stories should provide a study of the history of the short story as a literary form, as well as the elements, techniques, and conventions which distinguish the short story from other literary genres. The course may be organized historically or thematically, and should include stories of appropriate length and complexity for the level taught. Reading for pleasure should be stressed.

122-85 Themes in Literature

Themes in Literature should provide a study of common themes in literature, such as the journey of the hero, the trials of youth, the search for identity, and others appropriate to the level taught. The course should provide an examination of the manner in which the themes considered are treated by different writers in the different literary genres. It is suggested that representative works by authors of diverse eras and nationalities be considered, so that students may gain knowledge of mankind's struggle to understand the human condition.

122-90 World Literature

World Literature should provide a study of literature emphasizing works produced outside the United States and Great Britain, although works by other English-speaking authors may be considered. The course may be organized so that students may compare representative works produced by writers of various nationalities.

LANGUAGE STUDIES

123-05 Etymology

Etymology should provide a study of the history of the origins and meanings of English words, including roots, prefixes, suffixes, and rules of language change.

123-10 Grammar

Grammar should provide a study of the grammatical conventions of oral and written expression, including punctuation, usage, syntax, diction, and English spelling rules. It is suggested that students be given ample opportunity to practice and reinforce grammatical concepts through writing tasks of various length and complexity.

123-15 Linguistics

Linguistics should provide a study of language structures and patterns which provide meaning in language. *Linguistics* should also provide a history of language change and the psychological, social, and cultural factors that contribute to choices of structure and pattern by language users. Language structure and patterns determined by regional dialect should also be considered.

123-20 Vocabulary

Vocabulary should provide a study of the connotative and denotative meanings of words in a variety of contexts. The course should also provide a study of roots, suffixes, and prefixes as well as synonyms, homonyms, and antonyms. *Vocabulary* should also provide significant practice in determining the meaning of an unknown word in a given context. It should also provide practice in analyzing word analogies to reinforce logical thinking skills as well as to prepare for college entrance examinations.

SPEECH STUDIES

124-05 Debate

Debate should provide a study and practice of debating skills such as topic analysis, research, argumentation, and effective oral delivery in a group situation. The course should also reinforce students' logical thinking skills and the ability to respond coherently and logically in spontaneous situations.

124-10 Dramatics

Dramatics should provide a study of the theater arts such as acting, stagecraft, make-up, costuming, and other aspects of play production. The course should also provide significant practice in the vocal and physical techniques of acting and interpretation. Representative examples of outstanding drama may be studied.

124-15 Group Discussion

Group Discussion should provide a study and practice of speaking, listening, and leadership skills and how these skills are applicable to group dynamics. The course should also provide emphasis on formulating questions appropriate for group discussion, interview technique, and research skills.

124-20 Speech

Speech should provide a study and practice of the basic principles and techniques of effective oral communication. The course should also provide significant practice in building an awareness of audience and purpose when speaking in different situations. This may be accomplished by student presentation of the different types of speeches: viewpoint, instructional, demonstration, informative, persuasive, and impromptu.

MEDIA STUDIES

125-05 Journalism

Journalism should provide a study and practice in gathering information, interviewing, and note-taking for the purpose of writing, editing, and publishing for both printed media and student publications. The course should include instruction and practice in layout, design, and typography. Representative examples of amateur and professional journalism may also be studied.

125-10 Library

Library should provide instruction and practice in using procedures based upon library science theory. Emphasis should be placed on knowledge of specific reference materials according to research needs, knowledge of production and use of multimedia material for specific audio-visual uses, and knowledge of procedures practiced in libraries of various types, i.e., educational, public, and legal.

125-15 Mass Media

Mass Media should provide a study of television, film, newspapers, radio, and videotape as a source of information, persuasion, and creative expression. Students should develop the skills of discriminate judgement of media and use of persuasive language. They should also develop an awareness of audience and purpose in evaluation of the mass media as well as in their own production of media. The course may provide an opportunity for student-generated mass media, such as radio and television material, slide-tape presentations, films, and newspapers.

COMPOSITION STUDIES

126-05 Composition

Composition should provide study and practice of the process and conventions of creating effective written expression. A variety of modes should be practiced: description, narration, exposition, persuasion and argumentation. The concepts of appropriate choice of mode for audience and purpose and coherent, lineal, logical development should be stressed. Students should be able to use standard English syntax, diction, and vocabulary that are both grammatically correct and appropriate for the mode of a given writing task. Research skills should be taught in the course, culminating in a paper of appropriate length and complexity.

126-10 Creative Writing

Creative Writing should give students ample opportunity to combine literary creativity with the discipline of written discourse. The concept of the manipulation of language to convey an idea, feeling, mood, or visual image should be the basis of the course. Students should be familiar with and be able to use in their own writing the standard literary elements and techniques of both poetry and prose. Representative models of literary excellence should be studied.

126-15 Expository Writing

Expository Writing should provide practice of the process and conventions of creating effective explanatory types of writing such as resumes, consumer and business letters, essays, analyses, and expository research papers. The concepts of audience and purpose as well as coherent, lineal, logical development should be stressed. Students should be able to use standard English syntax, diction, and vocabulary that are both grammatically correct and appropriate for a given writing task. Research skills should be taught, culminating in an expository research paper of appropriate length and complexity.

126-20 Technical Writing

Technical Writing should provide study and practice of the process and conventions of effective technical report writing. A thorough knowledge of the concepts of audience and purpose as well as standard English syntax, vocabulary, and especially the diction appropriate to the writing task is necessary. Students should write technical reports of varying complexity in a variety of technical fields, perhaps in conjunction with other disciplines. This course is not recommended for those weak in language and writing skills.

126-25 Advanced Composition

Advanced Composition should reinforce the skills mastered in *Composition* and require a larger number of writing tasks of greater complexity. Research skills should be extended, culminating in a paper of appropriate length and complexity.

APPLIED ENGLISH

127-05 Business English

Business English should provide study and practice of the language skills needed to communicate effectively in business. The course should include letter and report writing, information organization, and effective oral presentations in business situations. Students should build a business vocabulary, as well as review and reinforce English grammar and writing skills.

127-10 Industrial English

Industrial English should provide the study and practice of the language skills needed to communicate effectively in industry. It should stress report and memo writing as well as organizing technical information for clear communication. Students should build an industrial vocabulary as well as review and reinforce English grammar and writing skills.

READING STUDIES

128-05 Developmental Reading

Developmental Reading should provide study and practice in the reading skills necessary to increase the students' rates of comprehension. Emphasis should be placed on the necessity to adjust reading speed to meet the demands of the material and to conform to the reader's purpose. The course should enhance student appreciation of reading as a leisure activity.

128-10 Remedial Reading

Remedial Reading should provide instruction and practice in the following reading fundamentals: factual comprehension, vocabulary building, following directions, summarizing, and critical reading. A variety of instructional techniques should be used; previewing the lesson, unit or topic summary, differentiated study guides, small group instruction, simulations, and peer tutoring are some of the possibilities. Instruction should be individualized, as much as possible, to meet students' needs. Teachers should be aware that students with low reading ability often have a negative self-concept, so efforts should be made to heighten self-esteem with improved reading ability.

Social Studies

(3) SOCIAL STUDIES

Kindergarten - Social Living Experiences 000-70

Social living should allow students to have experiences that enable them to move about, explore the school environment, and satisfy their intense curiosity. The students need experiences in which they can learn to express ideas and feelings in an appropriate manner. They should also learn to get along with other children, to understand that they should share materials, and to cooperate in order to complete tasks. Skills to be learned include: working in groups; using and sharing classroom materials and tools; and listening when other people speak. The development of inquiry skills such as observing, comparing, grouping/classifying, interpreting, and inferring can also be initiated at this level. The emphasis should be on developing the skills needed to work with groups and other individuals and also to develop self-reliance.

Grades 1-3 010-15, 020-15, 030-15

The overall goal of the social studies curriculum is citizenship education. To accomplish this goal, the social studies curriculum for the primary grades should enable students to identify themselves as citizens in their neighborhoods, local communities, their state and nation and other parts of the world. Topics covered in these grade levels should include self-concept, group behavior, community workers, community leaders, neighborhood service groups, and exploration of occupations, cultures, communication, and values. Emphasis should be placed on problem-solving skills such as interpreting symbols, identifying facts, classifying, simple sequencing, ranking, predicting, hypothesizing, using different types of information, interpreting cause and effect relationships, and valuing. Additional skills that should be taught include: using directions for determining geographic locations, reading flat wall maps, reading simple graphs and time lines, and collecting information on a given topic. At these grade levels students should be provided with opportunities to develop cooperation, responsibility, open-mindedness, tolerance of others, and a positive attitude towards work.

Grades 4-6 040-15, 050-15, 060-15

To accomplish the goal of citizenship education, the social studies curriculum for the intermediate grades should enable students to identify and to understand the many interrelationships that exist among citizens of the world. This should include the study of Indiana, the United States, North and South America, and the Western world. Topics covered in these grade levels should include: historical, economic, cultural, and political development, including the influence of geography, and the impact of changes in communications, transportation, and trade. There should be an emphasis on the difference in lifestyles and cultures, with a recognition of the interdependence that has developed among various regions. Emphasis should be placed on the additional problem-solving skills of questioning, determining fact and opinion, analyzing information, making comparisons, using primary and secondary sources, and conducting research. Additional skills that should be taught include: analysis of maps, globes, and charts, creation and interpretation of graphs, critical thinking skills, and the development of independent study skills. At these grade levels students should be provided with opportunities to develop a willingness to think reflectively about different issues, as well as to develop cooperation, responsibility, open-mindedness, and tolerance of others.

Grades 7-8 070-15, 080-15

To achieve the goal of citizenship education the seventh and eighth grade curriculum continues to emphasize historical, economic, cultural, and political development. The topics for study include seventh grade global studies, with special emphasis upon Europe, the Middle East, Africa, Asia, Latin America, and eighth grade United States history.

Seventh grade global studies should provide an opportunity for students to extend their knowledge of our world. In-depth studies should provide greater understanding of dependence on resources and the environmental influences on economic, cultural, and political institutions.

Eighth grade U.S. history should examine the development of representative government, including instruction on the Constitutions of Indiana and the United States, colonialism, democracy, revolution, territorial expansion with a focus on Indiana's concurrent growth during the development of the United States, immigration and assimilation, nationalism, slavery, abolition, civil rights, industrialization, technological development, and urbanization.

The curriculum should emphasize problem-solving skills including: identification, hypothesizing, information gathering, and decision-making.

Map reading skills should continue to be emphasized. Attitudes conducive to achieving the goal of citizenship education that were emphasized in earlier grade levels should be continued in grades 7 and 8.

Secondary

SOCIAL STUDIES COURSES

130-03 African Studies

The *African Studies* course should give students an understanding of and appreciation for the diverse peoples, cultures, and economic systems of the African continent. The course should examine the early kingdoms and cities of Africa, early trade routes with Europe and the East, the colonization of Africa by European countries, the African influence on the United States, the establishment of independent countries in Africa and contemporary traditions, literature, art, and other cultural aspects.

130-06 Anthropology

Anthropology should broaden students' perspectives concerning life styles or patterns of culture among peoples. The study should introduce the anthropologist's processes of observing and analyzing human behavior. Topics should include: theories and principles of culture formation, growth, functioning, and change; the relationship of culture to environment; and the relationship between cultural background and personality.

130-09 Applied Economics

Applied Economics should investigate the specific economic effects of market forces and government policies on individuals and the major institutional groups such as business and labor in the economy. Special attention should be given to economic concepts and principles used by consumers, producers, and voters. Learning experiences such as projects, field trips, or computer applications are strongly encouraged as ways to demonstrate practical applications of economic concepts.

130-12 Asian Studies

Asian Studies should provide insight into the diverse peoples and cultures of Asia. It should offer opportunities to study aspects of culture in one or more of the Asian countries. Attention should be given to religions, traditions, art, literature, and the development of social, economic, and political institutions. Examination of contemporary Asian societies and the interaction of Asia with the United States should be components of this course.

130-15 Citizenship/Civics

Citizenship/Civics should be an overview designed to help students become independent thinkers and conscientious citizens. The course should deal with political behavior problems which students and citizens consider to be relevant to the most pressing issues of the day. The course should provide students with experiences which will develop citizenship attitudes within a framework of democratic ideology. Topics should include the process of policymaking, methods of public participation in policymaking, citizenship rights and responsibilities in a changing society, and the relationship between modern society and government. The study of local government should be a component of this course.

130-18 Consumer Economics

Consumer Economics should develop the process of individual decision-making applicable to such areas as budgeting, saving and investing, shopping, choosing a job, and being an effective citizen. The course should develop skills necessary to identify and analyze information for rational decision-making.

130-21 Current Problems/Issues/Events

Current Problems should provide opportunities to apply techniques of investigation and inquiry to the study of significant problems or issues. Students should develop competence in recognizing cause and effect relationships; recognizing fallacies in reasoning and propaganda devices; synthesizing knowledge into useful patterns; stating and testing hypotheses; and generalizing based on evidence. Problems or issues selected should have contemporary historical significance and should be studied from the viewpoint of the social science disciplines. Community service programs, such as internships or other service experiences within the community, could be included.

130-24

Economics

Economics should include a study of the allocation of scarce resources and their alternative uses for satisfying human needs. This course should examine basic models of decision-making at various levels and in different areas including: decisions made as a consumer, producer, and voter; business decisions to maximize profits; and public policy decisions in specific markets dealing with output, employment, and prices in the national economy.

130-27

Ethnic Studies

Ethnic Studies should provide opportunities to broaden students' perspectives concerning life styles and cultural patterns of the various ethnic groups in the United States. The course should either focus on a particular ethnic group or groups, or use a comparative approach to study the patterns of cultural development, immigration, assimilation, contributions, and political impact of ethnic diversity in the United States.

130-30

Indiana Studies

Indiana Studies should be an integrated program comparing and contrasting Indiana and the nation's development in the areas of politics, economics, and history. The course should utilize Indiana history as a basis for understanding current policies, practices, and state legislative procedures. Students should acquire motivation to participate in political action as concerned citizens. This course should include the study of state and national constitutions, both historically and as a current foundation of government. The examination of personalities, life styles, and special concerns of leaders, as motivating forces in a democratic society, should be included.

130-33

International Relations

International Relations should provide a survey of the formal relations among sovereign states in the international system, emphasizing the operation of diplomacy. The procedures for settlement of disputes and various methods of conflict resolution should be included. This course should examine power, interdependence, global development, and international organizations.

130-36

Introduction to Social Science

Introduction to Social Science should develop an understanding of the nature of social sciences and present the reasons for studying them. This course should involve consideration of the social sciences as the study of humanity; consideration of the reasons for separate fields or disciplines; consideration of the objectives, materials, and methods of each discipline; and the difficulties encountered by the social scientist in applying the scientific method to the study of humanity. Content could include group and individual behavior, education, social systems, and the role of the social sciences.

130-39

Latin American Studies

Latin American Studies should provide an understanding of and appreciation for the diverse peoples, cultures, and economic systems of Central and South America and the Caribbean Islands. Content should include environmental and historical factors which have influenced the contemporary situation. Study of pre-Columbian civilizations; European colonial systems, and resulting institutions; independent governments; and current issues should also be included.

130-42

Law Education

Law Education should provide an understanding of the American legal system. Content for this course should be designed to promote an understanding of society and its system of laws by indicating how citizens may effectively function within the law. Ways of dealing with interpersonal conflict in order to secure constructive change should be included, along with the development of critical thinking and problem-solving skills. Case studies, field trips, simulations and mock trials should be used in the course whenever feasible.

130-45

Modern World Civilization

Modern World Civilization should provide an in-depth look at the twentieth century world. It should be a study of different cultures as they exist in the world today and make a comparative analysis of the various kinds of governmental, economic, and social systems. Foreign relationships should be examined partly from the viewpoint of national interests, including the successes or failures of diplomacy.

130-48

Political Science

Political Science should provide for a study of the processes and goals of politics, techniques of government, methods by which decisions are made, and the basis for decision-making. It should go beyond the study of governmental structure and function to include a study, through analysis, of such topics as the nature of the American party system, interest groups, public opinion, laws which affect students, reasons laws are changed, due process of law, legal rights, and legal responsibilities.

130-51

Psychology

Psychology should provide an opportunity to study individual and social psychology and how the knowledge and methods of psychologists are applied to the solution of human problems. Content for the course should include some insights into behavior patterns and adjustments to social environments. The course should develop critical attitudes toward superficial generalizations about human behavior, respect for the difficulty of establishing the truth of a proposition, and a heightened sensitivity to the feelings and needs of others.

130-54

Sociology

Sociology should provide an opportunity for students to study group behavior and basic human institutions. Broad areas of content should include the study of institutions found in all societies, such as the family; religions; community organizations; political, and social groups; and leisure time organizations. Moral values, traditions, folkways, the mobility of people, and other factors in society which influence group behavior should be included in the study.

130-57 State and Local Government

State and Local Government should be the study of the function and oganization of state, county, city/town and township governmental units. Primary focus should be on the major factors and issues in the state's political development. This course should also trace the role and influence of various political and social institutions on a state's political development. The implications of this development for governmental units should be discussed relative to current political and governmental situations. Field trips, observations, and interviews with state and local leaders should be encouraged whenever feasible.

130-60 Topics in History

Topics in History should provide students with studies of specific historical eras, events, or concepts. The development of historical research skills using primary and secondary sources should be emphasized. The course should focus on one or more topics related to United States or world history, such as twentieth century conflict, the American west, history of the United States Constitution, or democracy in history.

130-63 United States Government

United States Government should provide an opportunity to explore governing processes, elements of political theory and local, state, and national governmental structures. Opportunities to examine, evaluate, and make decisions concerning the operation of the system should be provided. The content should include topics such as: Indiana and United States Constitutions; legislative, judicial, and executive functions; government finance; civil rights and responsibilities; and the differing functions of local, state, and national government. One credit of *United States Government* is required for high school graduation (Rule G-1, Sec. 3.1(c)(2)).

130-60 United States History

United States History, a two semester course, should serve as a capstone, building upon concepts developed in previous studies of American history. It should emphasize developments in twentieth century America. A topical or comparative approach can be used in developing certain themes from America's past as they relate to life in the United States today. Opportunities should be given to develop inquiry skills by utilizing primary source material and a variety of historical accounts and documents. Investigation of problems, issues, and events should include the identification of cultural pluralism and the diversity of views in American society throughout its history. Two credits of *United States History* are required for high school graduation (Rule G-1, Sec. 3.1(c)(2)).

130-69 Urban Affairs

Urban Affairs should examine the history, organizations, processes, and distinctive aspects of urban centers. The rise of modern cities and an analysis of modern urban problems should be dealt with in this course. The politics of governing urban areas, including the selection of political leaders and citizen participation in the decision-making process, should be emphasized. Data collection skills may be taught in conjunction with the study of this course.

130-72 World Geography

World Geography should provide an opportunity to study the interaction of humans and their environment in space and time. The study should include current developments around the world which affect physical and cultural settings. Physical settings studied should include resources, climate, and environmental conditions. Cultural settings include population patterns, political structures, life styles, economics, customs, and past events that affect the environment.

130-75 World History/Civilization

World History/Civilization should provide for a study of selected world cultures, past and present. Content should provide a basis for students to compare and analyze patterns of culture, emphasizing both the diversity and commonality of human experience and behavior. Suggested general units are: prehistory, the Middle East, Western Europe, Eastern Europe and the Soviet Union, Asia, Latin America, and Africa. The course may be designed to focus on early world civilizations, including the rise of civilizations in the fertile crescent, Africa and Asia, and on the classical civilizations of Europe, Asia, Africa, and Latin America or it may be designed to focus on western civilizations, including European history, twentieth century conflicts and cooperation, or the course may be a concentrated study of one or more European countries.

(4) FOREIGN LANGUAGES

Foreign language instruction is defined as a sequence of levels: levels one and two constituting beginning foreign language; level three, intermediate; and levels four and beyond, advanced foreign language studies. A level is defined as the equivalent of one year's instruction in grades 9 through 12. Because a foreign language level is not tied to the students' grade level, varying sequence patterns are possible, depending upon the grade in which foreign language study is initiated.

Foreign Language Level	Grades					
	4-6	7-8	9	10	11	12
I	*	*	*	*	*	*
II		*	*	*	*	*
III			*	*	*	*
IV				*	*	*
V					*	*
VI						*

Although grades K-3 are not included in the scheme above, schools that wish to implement a standard FLES (Foreign Language in the Elementary School) sequence can do so by initiating instruction at the kindergarten level or in grades 1-2. In the primary grades (K-3), daily instruction in the language of no more than 15-20 minutes is recommended with the emphasis on developing speaking and listening skills. If a standard FLES is implemented at one of the primary grades, some adjustments may need to be made in the levels of instruction, especially in grades 4-6.

Level I

French, German, Russian, Spanish, and Other Modern Languages
140-02 140-12 140-32 140-22 142-42

Level I should introduce the pronunciation and intonation patterns and the basic grammatical structures of the language in order to develop elementary listening, speaking, reading, and writing skills. At this stage, the lexicon should be minimal vocabulary for active use. While the early stages of Level I should be devoted to "skill-getting" activities, i.e., phonetic and grammatical drills and exercises, there should be increased "skill-using" activities to develop the students' communication skills, including: (1) listening comprehension exercises of increasing difficulty; (2) guided and structural oral communication tasks in phonetically acceptable language; (3) reading graded and glossed materials; and (4) writing correctly the language which has been produced orally. Learning about the cultures which use the language should be an integral part of all language instruction. The topics most commonly included in this level are greetings, social amenities, monetary systems, work and leisure activities, and geography.

Level II

French, German, Russian, Spanish, and Other Modern Languages
140-03 140-13 140-33 140-23 142-43

Level II should open with a systematic review of the Level I work. While the emphasis in Level I is on phonology, basic grammar, and the listening and speaking skills, Level II should concentrate on mastery of syntax, expansion of vocabulary, and put increased emphasis on reading and writing skills. Instruction should provide for students' increased ability to: (1) listen to and acquire information: (2) express themselves more freely and with greater linguistic sophistication and fluency in discussions, simulations, role-playing situations, and conversations; (3) read, comprehend, and discuss edited expository materials; and (4) write synopses, short compositions, and letters with accuracy and appropriate idiomatic expression. The cultural studies integrated with the language studies at this level should be broadened to include the study of the history, government, and civilization of the people who speak the language.

Level III

French, German, Russian, Spanish, and Other Modern Languages
140-24 140-14 140-34 140-24 142-44

Level III should provide greater facility in all the language skills. In speaking and writing, opportunities should be given to express original ideas, and expanding vocabulary according to individual interests. The reading materials should consist of expository prose, including cultural studies aimed at providing an understanding of the major developmental trends in such areas as history, literature, art, music, and the modern societies of the countries speaking the language. At this level, the class should be conducted primarily in the target language.

Level IV

French, German, Russian, Spanish, and Other Modern Languages
140-05 140-15 140-35 140-25 142-45

Level IV should include one of the following two basic aims: (1) to provide a broad survey of the literature of the country or countries speaking the language through selected readings from major authors; and/or (2) to give opportunities to study a variety of contemporary topics in newspapers, magazines, and current publications. Varied experiences should be offered to refine communication skills via listening, speaking, reading, and writing activities. Advanced placement courses should also be considered at this level.

Levels V and VI

French, German, Russian, Spanish, and Other Modern Languages
140-06,07 140-16,17 140-36,37 140-26,27 142-46,47

If the sequence of foreign language instruction has been started early enough (grade 4 or 7) to allow Level V or both Levels V and VI to be offered, these courses should allow students to pursue special topics in areas such as literature, culture, and/or language skills development. Advanced placement courses should also be considered at these levels.

Level I

143-52 Latin

Level I should begin with explanatory and drill activities on pronunciation, syllabification, and accent. The basic purpose of instruction at this level is to provide a background in the fundamentals of grammar, especially: (1)

the inflection and uses of nouns, pronouns, and adjectives; (2) the formation and use of adverbs; (3) the conjugation of the six tenses, active and passive, in the indicative and imperative moods; (4) the comparison of adjectives and and adverbs; (5) the usage of cardinal and ordinal numbers; and (6) the formation and use of infinitives and participles in such functions as the ablative absolute and indirect statement. The drill activities should extend to complete sentences and manipulative Latin-to-Latin exercises, rather than being confined to isolated forms or the listing of forms. Since the emphasis in learning Latin is on learning to read the language, there should be maximal experience in reading graded materials and progressing from simple "made" Latin narratives to edited "real" Latin readings. These readings should reflect Roman life styles and culture rather than contemporary American life. The acquisition of a basic Latin vocabulary should be integrated with exercises involving meaning, word building and the use of derivatives in meaningful contexts.

Level II
143-53
Latin

Level II should open with a systematic review of the work of Level I. While the work in Level I emphasizes basic grammar forms, Level II focuses on Latin syntax, including: (1) the formation and use of gerunds and gerundives; (2) the formation and uses of the subjunctive mood; (3) the irregular verbs, especially fero, fio, volo, nolo, and malo; and (4) the deponent verbs. The course should focus on reading skills, beginning with "made" Latin narratives, ideally connected by a theme or sequence of actions. At least a full semester's work on edited selections from a Roman author or authors should be included in the course. The cultural component should focus on Roman civilization and history and Rome's role in the development of western civilization.

Level III
143-54
Latin

Level III should provide the opportunity for either an in-depth study of a single author, such as Cicero, with concentration on the political, architectural, literary, religious and social movements of the period in which the author lived and wrote; or a survey of many excerpted selections from a wide range of Roman authors to include a variety of styles.

Level IV
143-55
Latin

Level IV should continue with activities similar to those described in Level III. Opportunities should be provided for developing information-acquisition skills through research projects and for pursuing individual interests, as well as pursuing in-depth study of the basic content of the course.

Levels V and VI
143-56-57
Latin

If the sequence of Latin instruction has been started early enough (grade 4 or 7) to allow Level V or both Levels V and VI to be offered, these courses should allow students to pursue special topics in which they display interest or ability.

Level I

144-62

Other Classical Languages

Level I should begin with explanatory and drill activities on pronunciation, syllabification, and accent. The basic purpose of instruction at this level is to provide a background in the fundamentals of grammar. Since the emphasis on learning a classical language is on learning to read the language, there should be maximal experience in reading graded materials and progressing from simple "made" narratives to edited "real" readings. The acquisition of a basic vocabulary should be integrated with exercises involving meaning, word building, and the use of derivatives in meaningful contexts.

Level II

144-63

Other Classical Languages

Level II should open with a systematic review of the work in Level I. While the work in Level I emphasizes basic grammar forms, Level II focuses on syntax. The course should also focus on reading skills, beginning with "made" narratives, ideally connected by a theme or sequence of actions. At least a full semester's work on edited selections from an author or authors of the particular classical language should be included in the course. The cultural component should focus on the civilization and history of the people who spoke and wrote in the particular classical language being studied.

Level III

144-64

Other Classical Languages

Level III should provide the opportunity for either an in-depth study of a single author with concentration on the political, architectural, literary, religious, and social movements of the period in which the author lived and wrote; or a survey of many excerpted selections from a wide range of authors to include a variety of styles.

144-65

Level IV
Other Classical Languages

Level IV should continue with activities similar to those described in Level III. Opportunities should be provided for developing information-acquisition skills through research projects and for pursuing individual interests, as well as pursuing in-depth study of the basic content of the course.

144-66-67

Levels V and VI
Other Classical Languages

If the sequence in the classical language has been started early enough (grade 4 or 7) to allow Level V or both Levels V and VI to be offered, these courses should allow students to pursue special topics in which they display interest or ability.

145-05,10,15

French, German, Spanish Speaking
and

145-20

Slavic Language Cultural Studies

The purpose of these courses is to provide instruction in the various aspects of the particular foreign language-speaking cultures involved. This should include both the formal components of the culture such as geography, history, the arts, etc., and the deep cultural components, such as the contemporary life styles of the societies involved. If these courses are not part of the standard foreign language sequence, they could be taught in the English language.

147-05 Applied Linguistics

As part of the foreign language sequence, this course should be an upper level course. It should provide instruction in various structural aspects of the foreign language involved, such as phonology, morphology, and syntax. Contrasting the structures of the foreign language with English could also be a component of the course.

147-10 Etymology

Etymology should provide instruction in the derivation of English words and word families from their Latin and Greek roots. This may or may not include Germanic roots. This course may or may not be part of a standard foreign language sequence, however, in many cases, it would be a component of the Latin curriculum.

148-05 Conversation in Foreign Language

Conversation courses are designed to provide instruction for those students whose abilities or personal interests are in developing their oral skills in a particular foreign language. These courses may be part of a foreign language sequence or they may be offered as an alternative to the standard sequence.

148-10 Exploring Foreign Languages

Exploratory foreign language courses or offerings are readiness programs for students who have not had the opportunity to experience foreign language learning in the lower grades. Typical objectives of such courses should be: (1) to motivate greater interest in language learning; (2) to master a limited body of language material; (3) to improve study techniques, especially those useful in learning a foreign language; (4) to improve reading skills through vocabulary awareness and acquisition; (5) to increase sensitivity to and appreciation of different cultures; and (6) to provide a more effective way for students to determine which foreign language(s) they wish to study.

148-15 Foreign Language for Specific Careers

These courses should provide instruction in a specific foreign language for students' specific career goals. Examples of such courses are, "Spanish for Secretaries," "German for Business," "French for the Foreign Service," "Russian for Scientists," "Spanish for Public Service Careers," etc. These courses may be part of the standard sequence or may be taught as a separate component of the foreign language curriculum.

148-20 Foreign Language for Travel

These courses should provide instruction in a specific foreign language to those students who want to develop their foreign language skills so that they can maximize the benefits of travel abroad. These courses may be part of the standard sequence or may be taught as a separate component of the foreign language curriculum.

148-25 Reading in Foreign Language

These courses should provide instruction for those whose abilities or personal interests are in developing their reading skills in a particular foreign language. These courses may be part of a foreign language sequence or they may be offered as an alternative to the standard sequence.

Mathematics

(5) MATHEMATICS

Elementary

Kindergarten - Mathematical Experiences 000-90

Kindergarten students should be provided with numerous activities which include instructional games and manipulatives in order to develop the concepts of numbers and numeration. These activities should emphasize the number names, the recognition of symbols, and the one-to-one correspondence involved in counting. Students should be able to locate points on the number line from one to ten. Student learnings should also include, but not be limited to: the recognition of sets of objects with common properties, the ordering of sets of objects from the least to the greatest, the combination of two sets as an introduction to addition, and the separation of members of a set as an introduction to subtraction. Students should also be introduced to geometric shapes and sizes, and should compare various figures and discriminate among them. The measurement concepts of larger/smaller, nearer/farther, first/last, lighter/heavier, and shorter/longer should be introduced and practiced through verbalizations and through activities. Introductory problem-solving skills should include students acting out story problems read by the teacher, as well as drawing pictures to illustrate story problems told by the teacher.

Grades 1-3 010-10, 020-10, 030-10

Mathematical experiences in the primary grades should enhance the sequential cognitive development of arithmetic concepts and skills, as well as the affective development of positive attitudes toward mathematics. The content included in the primary grades represents an important foundation for future study and understanding of mathematics.

The use of activities, manipulatives, and instructional games should be encouraged to reinforce mathematical concepts and skills in the primary grades. Student learnings should include, but not be limited to, the concepts of: greater than, less than, equal to; even/odd; ordering of numbers; place value; and zero as the identity element of addition. Addition and subtraction with and without regrouping, as well as an introduction to multiplication and division, should be important components of instruction and practice in the primary grades. The relationships of addition and subtraction, and multiplication and division should be studied. The commutative and associative properties of addition and multiplication should also be included.

Student learnings in geometry should include, but not be limited to: shape recognition; comparison and discrimination among figures; closed and open figures; inside/outside of figures; right angles; fractional parts of figures; and equivalent fractions demonstrated by geometric figures.

Student learnings in measurement should include, but not be limited to: money value; linear measurements; telling time; and identifying seasons, months, and days of the week.

In the areas of problem-solving and critical-thinking skills, students should be able to solve open sentences with one or two variables, write number sentences which correspond to story problems, locate ordered pairs on a grid, and interpret bar and picture graphs.

Grades 4-6 040-10, 050-10, 060-10

Mathematical experiences in the intermediate grades should provide for the continued sequential development of mathematics skills and concepts. Reinforcement of those skills and concepts acquired in the primary grades should be coupled with the introduction of more advanced skills and concepts for practice and mastery. Attention should also focus on the affective development of students' attitudes and feelings about mathematics. A firm foundation in basic arithmetic skills should be provided by instruction in the intermediate grades.

Student learnings should include, but not be limited to: operations with whole numbers, fractions and decimals; estimation, mental arithmetic and rounding; ordering of fractions and decimals; equivalent forms of fractions, decimals, and percents; familiarity with the number line for ordering whole numbers, fractions, and decimals, and for expressing solutions to equalities and inequalities; prime numbers, factorization, and prime factors; greatest common factor (GCF), least common multiple (LCM), and least common denominator (LCD); properties of one and zero, and the distributive property; exponential notation; and Venn diagrams.

Student learnings in geometry should include, but not be limited to: identification and discrimination of figures; perimeter; area and volume by counting activities; scale drawings; circle, center, radius and diameter; angles; parallel and intersecting lines; transformations; symmetries of shapes; and congruence and similarity.

Student learnings in measurement should include, but not be limited to: measurements with higher degrees of accuracy than those in the primary grades; conversions of units; and operations with measurements. Instruction in measurement skills should include exercises from the English and metric systems.

Student learnings in problem-solving and critical-thinking skills should include, but not be limited to: solutions of story problems using number sentences, diagrams, and unknowns represented by letters of the alphabet; and ratio and proportion. Students should also be able to solve problems by: gathering, organizing, graphing and interpreting data; using picture, bar, line, and circle graphs; and critically comparing various graphing techniques.

Grades 7-8 070-10, 080-10

Mathematical experiences in junior high/middle school should provide for the continued sequential development of mathematical skills and concepts. Reinforcement of those skills and concepts acquired in the intermediate grades should be combined with the introduction of more advanced skills and concepts for practice and mastery. Attention should also focus on the developmental needs of young adolescents. Numerous opportunities should be provided for educational activities and practical applications of mathematics in the students' environment. The affective needs of young adolescents should also be considered in the delivery of instruction with the use of calculators/computers encouraged.

Student learnings should include, but not be limtied to: operations with positive and negative integers; rational numbers and irrational numbers; composite numbers; operations with whole numbers, fractions, decimals; rounding and estimation; conversions of fractions, decimals and percents to equivalent forms; recognition of number patterns; familiarity with different bases and converting from one base to another; inverse operations; square root; and rational approximations of irrational numbers.

Student learnings in geometry should include, but not be limited to: identification of angles and polygons; triangle measure (180°); parallelograms; perimeter, area, and volume by computation using formulae of selected geometric figures; identification of edges, faces, vertices, and diagonals of geometric figures; surface area and volume of selected geometric figures; constructions; lines of symmetry; and similarity and congruence.

Student learnings in measurement should include, but not be limited to: operations with measurements; measuring angles with a protractor; scale drawings; conversion of standard units to equivalent measures; and degrees of error in measures. Instruction in measurement skills should include exercises from the English and metric systems.

Student learnings in problem-solving and critical-thinking skills should include, but not be limited to: identification of solution sets; solving simple linear equations using one or two steps; solving story problems with two or more steps using number sentences and/or diagrams; writing story problems to fit number sentences; telling how to solve story problems of one or more steps; solving open sentences using inverse operations; determining function rules from examples; and graphing with different scales and critically comparing results.

Student learnings in probability and statistics should include, but not be limited to: finding the mean of a set of data; identifying the measures of central tendency of a given set of data; analyzing and solving simple probability problems; and predicting outcomes from multiple events.

Secondary

(A) APPLIED MATHEMATICS COURSES

152-05 Basic Mathematics

Basic Mathematics should further develop a wide variety of mathematical skills, concepts, and applications to the environment. It should provide for, but not be limited to, student learnings in: number systems, geometry, English and metric measurement, ratio and proportion. In developing these concepts, the course should include number theory and a major emphasis on the use of algorithms and other methods of solving problems. The use of estimation skills and calculators/computers should be encouraged.

152-10 General Mathematics Level I

General Mathematics I should emphasize the continued development of computational skills and applications in the environment. The course should provide for, but not be limited to, students learnings in: the fundamental concepts of geometry (properties and constructions), algebra (the solution of open sentences using sets of numbers), and statistics (organizing and interpreting). Computational techniques involving integers, fractions, and decimals should be reviewed. The use of estimation skills and calculators/computers should be encouraged. This course should be designed for those who are in need of further development in mathematics prior to entering more formalized courses.

152-15 General Mathematics Level II

General Mathematics II should encompass materials covering a wide variety of topics. It should provide for, but not be limited to, student learnings in mathematical concepts such as: the ordering of rational numbers, factorization, solution of first and second degree open sentences (including graphing), problem-solving techniques, ratio and proportion, exponents, congruences and similarity, informal proofs of theorems, and the basic trigonometric ratios.

152-20 Consumer Mathematics

Consumer Mathematics should meet the needs of students at various levels with regard to practical applications of basic mathematical concepts. The main purpose of the course is to assist in the acquisition of skills which will increase the ability to make rational consumer decisions. The course should provide for, but not be limited to, student learnings in: budgeting, personal finances, operation and maintenance of a home, taxes, automobile maintenance, investments, insurance, and data collection as a basis for solving problems. The use of estimation skills and calculators/computers should be encouraged.

152-25 Business Mathematics

Business Mathematics provides for, but should not be limited to, student learnings in the use of basic mathematical concepts in the solution of problems related to business and industry, i.e., sales, discounts, taxes, interest, insurance, transportation and cost, as well as items of personal finance.

152-30 Shop Mathematics

Shop Mathematics is designed for students in Industrial and/or Vocational Education programs. The course should promote the acquisition of mathematical concepts which will help solve problems usually arising in an industrial or vocational setting utilizing both English and metric measurement.

(B) ALGEBRA RELATED COURSES

153-15 Introductory Algebra Level I

Introductory Algebra I is designed to serve those students who wish to continue formal mathematics education but need further preparation. Therefore, the course should provide for, but not be limited to, student learnings in the basic concepts of the first half of *Algebra I* in an extended time frame.

153-10

Introductory Algebra Level II

Introductory Algebra II, a continuation of *Introductory Algebra I* should provide for, but not be limited to, student learnings in the basic concepts of the second half of Algebra I in an extended time frame. This course should also provide for frequent review of the material covered in *Introductory Algebra I*.

153-15

Algebra Level I

Algebra I should provide for, but not be limited to, student learnings in: the basic properties involving the real number system, solution and evaluation of open sentences (equalities and inequalities), solution of open sentences by graphing (number line and coordinate plan), solution of systems of open sentences, basic operations with polynomials, solution of quadratics, understanding and using elementary functions, and exponentials.

153-20

Algebra Level II

Algebra II should expand from *Algebra I* to include the properties and operations of real numbers. The course should provide for, but not be limited to, student learnings in: the use and understanding of functions and functional notation, the use of algebraic theorems and algorithms, the use of graphing and other methods of solving open sentences of higher order including the introduction and use of conics, series, exponential functions, limits, the complex number system, and other advanced algebraic concepts.

153-25

College Algebra

College Algebra should include selected topics from Algebra II for emphasis and expansion. It should provide for, but not be limited to, student learnings in: polynomials, and polynomial equations, exponentials and logarithmic functions, fundamental algebraic theorems, probability, vectors, determinants, and matrices.

153-30

Abstract Algebra

Abstract Algebra should be designed to further investigate the premises upon which the more computational areas of mathematics are based. It should provide for, but not be limited to, student learnings in: set theory, equivalence relations and associated equivalence classes, mapping, groups, rings, fields, homomorphisms, and subsets of the rational numbers which illustrate theorems and axioms formulated. This course will be most appropriate for the college bound student with a strong interest in mathematics.

(C) GEOMETRY RELATED COURSES

154-05

Informal Geometry

Informal Geometry should encompass the fundamental concepts of geometry through variations in method, either by increasing the use of intuitive proof and decreasing the use of formal proof structure, or through a greater emphasis on applications.

154-10 Geometry

Geometry should stress the uses of deductive reasoning and inductive reasoning in drawing conclusions. It should also deal with fundamental geometric figures and the properties and relationships involving these figures: angles, lines, and planes; congruent triangles; similar triangles; polygons; circles; areas of polygons and circles; areas and volumes of geometric solids; and coordinate geometry. In addition, this course should include formal proof structures and the use of logic in developing these proofs.

154-15 Analytic Geometry

Analytic Geometry should encompass the application of analytical methods to proofs and problem solving. The course should provide for, but not be limited to, student learnings in: the analytic geometry of the straight line, conics, parametric equations, translation of axes, loci, relations, functions, and vectors. The course should include discussions of these concepts in three dimensions.

154-20 Trigonometry

Trigonometry should provide for, but not be limited to, student learnings in: the trigonometric functions and their graphs, the inverse trigonometric functions, trigonometric equations and identities, vectors, the Law of Sines, the Law of Cosines, applications, and polar coordinates.

(D) OTHER UPPER LEVEL MATHEMATICS COURSES

155-05 Advanced Unified Mathematics

Advanced Unified Mathematics is an integration of the major materials contained in the *Trigonometry*, *College Algebra* and *Analytic Geometry* courses.

155-10 Probability and Statistics

Probability and Statistics should encompass the fundamentals of probability with statistical applications. It should provide for, but not be limited to, student learnings in: central tendencies, dispersions, permutations, combinations, applications of combinatorial theory and the laws of change, and elementary sampling theory. Particular emphasis should be given to applications which will test statistical hypotheses and the use of samples to make projections.

155-15 Calculus

Calculus should provide for, but not be limited to, student learnings in the fundamentals of calculus, i.e., limits, continuity, derivatives, definite integrals, and techniques of integration involving rational, trigonometric, logarithmic, and exponential functions. The course should also include applications of the derivative, the integral, and the theory of calculus.

Science

(6) SCIENCE

Kindergarten - Environmental Experiences 000-80

Kindergarten children should be provided experiences in which they are encouraged to explore their immediate natural and man-made environments, both at school and at home. In these explorations, the children should have opportunities to use their developing psychomotor, cognitive, and affective skills to gain an awareness of and an appreciation for the similarities and differences among objects and events which they encounter. They should also have opportunities to use these developing skills to solve simple problems. The emphases for these experiences should be: to develop the children's abilities to make observations about real objects and events; to explore ways of classifying and/or ordering the observed objects and events; to recognize space/time relationships; and to use verbal, pictorial, and graphic skills in communicating their observations and interpretations.

Grades 1-3 010-20

The science program in the primary grades should provide the foundation for the development of the students' abilities to engage in scientific methods. Students should be provided learning experiences that cultivate their abilities to manipulate, explore, understand, and cope with the natural and man-made environments relating to living things, matter, energy, the earth, space, and weather. Emphasis should be placed on the basic skills of inquiry through exploratory activities which utilize events, objects, and concepts associated with the students' immediate surroundings. These activities should develop the students' basic inquiry abilities of observing, classifying, measuring, using numbers and shapes, identifying space/time relationships, and communicating these observations and relationships to others. Primary students should have opportunities to formulate inferences and predictions based on possible causes or meanings from a single observation or set of observations. The science program should relate content to other subject areas and offer students experiences with individuals having science- and technology-related careers. The science curriculum should be adequately sequenced to correlate with students' developmental levels and sensorimotor skills while remaining open enough to promote spontaneity, creativity, and excitement about science and learning.

Grades 4-6 040-20, 050-20, 060-10

The science program in the intermediate grades should be a continued, sequential development of the primary grade curriculum. The curriculum should be designed to promote students' understandings of the relationship of science to their personal needs and foster their awareness of science-related careers as well as to demonstrate the technological application of science and its social implications. The students should manipulate materials and equipment in exploratory activities which permit their recognition of concepts which they will apply to new problem-solving situations. The program should provide a balance of physical, earth, and life science content; expand students' understandings of science facts, concepts, and theories; and foster the development of positive scientific attitudes. Students should have an opportunity to formulate and test hypotheses and predictions through experimentation by collecting and interpreting data, developing operational definitions, and controlling and manipulating variables. Students should be able to identify the difference between fact and opinion; collect, interpret and express data through graphs, charts, tables, diagrams, and maps; integrate science with other subject areas; and share ideas by receiving or transmitting precise science information through verbal and written communication.

The middle/junior high school science program should provide students with a sequence of learning experiences through which they can continue to develop the sciencing skills, attitudes, and strategies used in elementary school science. The program should provide students with many opportunities to relate their classroom experiences to daily living and to explore the use of science and technology in a variety of careers. Through the extensive use of laboratory activities, these students should refine their abilities to: recognize and manipulate variables; collect data; develop operational definitions; analyze systems; formulate models and hypotheses; design and conduct experiments; generalize and apply results; recognize and refine problems; and communicate their results to others using a standardized measuring system in charts, graphs, and other media. School corporations may choose either a general science sequence or a series of specific area-oriented science courses to provide students with these experiences:

General Science

A general science program for the middle/junior high school grades should involve students in a sequence of learning experiences through which they can synthesize and apply the fundamental concepts about nature. The phenomena selected in the general science course sequence should avoid overemphasizing the content and structure of any specific science discipline such as biology, chemistry, or physics. Rather the phenomena should be selected to emphasize the nature of science and its interrelationships to technology and social progress. The middle/junior high school general science program should be organized into the following courses.

060-20 Middle School - Grade 6 General Science

Grade 6 *General Science* in the middle school can follow one of two basic formats. The course may merely extend the grades 1-5 science program into the first year of the middle school, utilizing the additional resources of the middle school's specialized staff and facilities, or the course may be specifically designed to serve the unique needs of pre-adolescent students as they become acquainted with the middle school's more diverse resources.

070-20 Grade 7 General Science
080-20 Grade 8 General Science

Grade 7 and 8 *General Science* should provide for the continued development of the students' inquiry and problem resolution skills, attitudes, and strategies through a wide variety of laboratory activities which are supported with readings of an appropriate level.

Specific Area-Oriented Science

A three year sequence of science courses for grades 7-9 or 6-8, depending upon the grade level organization of the school corporation, should give students a comprehensive overview of specific science disciplines by focusing attention on different areas of scientific inquiry in each grade. Each course should include laboratory experiences designed to present middle school students with challenges consistent with their psychomotor, cognitive, and affective maturation rather than present less sophisticated content using the methodology of similarly titled high school courses.

In developing this option, schools would provide two or three of the following courses in a sequence, appropriate for their student populations and for the schools' resources.

Middle School Life Science

060-21 *Life Science* should provide the students with laboratory and
070-21 field opportunities through which they may observe and understand
080-21 similarities and differences among living organisms,
including internal structures and processes. This course should provide students with opportunities to develop an understanding of the basic life functions and needs and to apply this understanding to real life situations.

Middle School Earth/Space Science

060-22 *Earth/Space Science* should provide students with opportunities
070-22 to understand the relationship of earth formations and processes
080-22 to the earth's geological history as well as the earth's relationship
to both the macro- and microcosms. Students should investigate the similarities and differences among heavenly bodies and the forces at work in shaping our earth environment. Whenever possible, earth processes should be related to local earth formations and phenomena through field trips to these locations. When such direct observations are not possible, these processes should be simulated in the laboratory or presented through films, videotapes, and other media from which the students can collect data for their investigations.

Middle School Physical Science

060-23 *Physical Science* should provide students with opportunities
070-23 to develop an understanding of the physical world as well as
080-23 the technology which has been used to harness its elements,
forces, and energies. Middle school students should be provided direct learning experiences through which they can investigate and apply the matter/space/energy relationships to phenomena they encounter in real life.

(A) INTEGRATED SCIENCE

(i) GENERAL SCIENCE COURSES

161-05 Basic Science (L)*

Basic Science is a two or four semester program dealing with the basic principles of science and placing emphasis on providing first-hand investigations of phenomena drawn from a variety of science disciplines. Although textbooks will provide most of the supporting readings and activities for this course, content selection should be based on developing those problem resolution skills and strategies which the students will need to become effective decision makers and productive workers in a scientific and technological society. *Basic Science* courses should be designed for students who can better profit from them than they could from a more rigorous high school science course sequence.

161-10 Introductory Science (L)
(formerly General Science)

Ninth grade *General Science* should provide students opportunities to investigate phenomena from a variety of science disciplines while developing the conceptual base needed for subsequent in-depth study of biology, chemistry, physics, and/or the earth/space sciences. The course should provide laboratory and other learning activities through which the students can continue developing science-related motor skills, information processing skills, problem resolving strategies, sciencing attitudes, and communication skills. Further, the course should provide students with opportunities to develop an awareness of the processes which mankind has used to understand, control, and adapt to the natural environment; explore the utility of science-generated knowledge in a variety of careers; and in resolving problems related to personal needs and social issues.

161-15 Laboratory Techniques (L)

Ninth grade *Laboratory Techniques* should provide students with an introduction to common laboratory procedures and skills which they will need to make first-hand investigations of the living and physical world in subsequent science courses; in particular, those courses which focus on the application of science to daily life problems and societal issues, rather than the study of a specific science discipline. This course should also develop those skills needed to review and judge the validity of science "findings" reported in the media. Through laboratory experiences selected to illustrate a wide variety of research and industrial procedures, students should be provided the fundamental principles of biology, chemistry, physics, and the earth/space sciences.

161-20 Practical Science (L)

Practical Science is a two or four semester program providing students with opportunities to perform laboratory and field investigations of specific applications of science concepts and principles to everyday life and work problems. The emphasis of *Practical Science* should be on developing the skills needed by students to become more discriminating consumers and more productive workers in our scientific and technological society. A variety of topics may be explored in this course, but the selection of these topics should be based upon the individual needs, interests, and abilities of the students. *Practical Science* should not use textbooks as the basis of course content or as the major student reading resource. Rather, the course content should emerge from a series of first-hand investigations of natural and manufactured phenomena which catch and hold the students' attention. Reading material for *Practical Science* should be selected from a variety of sources such as public information and commercial pamphlets, current magazines, trade books, users' guides, and technical manuals that are of interest to the students and are written at a level which they can comprehend. *Practical Science* courses should be designed for students who could find them more beneficial than a more rigorous high school science course sequence.

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*Any course which is suffixed with a capital "L" in parentheses is to be presented as a laboratory course.

161-25 Advanced Integrated Science

Advanced Integrated Science is an upper level, 11th or 12th grade, course which should place emphasis on developing scientific literacy by allowing students to perform laboratory and field investigations as well as to conduct supporting literature searches dealing with a variety of phenomena. The emphasis of these investigations should be to assist the students in conceptualizing the unifying themes of scientific knowledge and internalizing the strategies of scientific inquiry and problem resolution. The goal of the course should be to have students develop theoretical models which are useful in testing hypotheses and evaluating alternative problem solutions. Successful completion of three years of high school science should be a prerequisite for enrollment in *Advanced Integrated Science*.

(ii) UNIFIED SCIENCE SEQUENCE COURSES

162-05 Unified Science Sequence
(Formerly Integrated Science Sequence)

Unified Science Level I (L)
Unified Science Level II (L)
Unified Science Level III (L)
Unified Science Level IV (L)

By using the *Unified Science Sequence*, schools can eliminate duplication of subject matter while stressing the interrelationships of the sciences. This sequence of courses should involve students in laboratory and field investigations of basic concepts, theories, and principles as they are exhibited in the subject matter of the various science disciplines. The learning activities in this program should be designed to advance the development of the inquiry skills, the problem resolution strategies, the sciencing attitudes, and the science communication skills which the students will need to become discriminating personal and socio-political decision makers. The length of the sequence may vary from four to eight semesters, but the entire sequence should be coordinated so that a student can terminate science study after completing two or three years of the sequence with a balanced treatment of the various science disciplines.

(iii) APPLIED SCIENCE COURSES

163-05 Applied Laboratory Procedures

Applied Laboratory Procedures should provide students with experiences in using the procedures and techniques of specific laboratory processes while studying the theoretical bases for these procedures. The course may present laboratory procedures used in given educational, research or industrial settings or those used in a variety of such settings. The practical experiences for this course may be provided by students serving as high school laboratory assistants; however, the students should observe the operation of other laboratories. At least two years of high school science should be a prerequisite for enrollment in *Applied Laboratory Procedures*.

163-10 Environmental Sciences

Environmental Sciences should provide students with an opportunity to use scientific procedures to carry out a first-hand, on-site investigation of one or more set(s) of conditions which have an effect on the environment. Students should also explore and evaluate alternatives to the existing environmental conditions in terms of scientific or technological feasibility, cost, and impact on the ecology of the area as well as on the economy and quality of life in the community. In cases in which environmental improvement is desirable, the students should develop and evaluate one or more proposals for achieving the desired improvement. The environmental conditions studied may involve land use, waste disposal, or air, water, land, visual, or sound pollution issues. The issues studied should be ones which have meaning to the students.

163-15 Science and Societal Issues

Science and Societal Issues, which is intended for 11th or 12th grade high school students, should promote the development of citizens and leaders who seek and utilize appropriate data and information as they cope with science-related societal issues. The course should focus on specific societal issues resulting from the interaction of science, technology, and society; however, laboratory and field experiences should be an integral part of the course. Phenomena should be selected to illustrate the concerns arising from knowledge generated in the biological sciences, chemistry, physics, and the earth/space sciences such as: short and long term energy resource problems, pollution problems including hazardous chemical and nuclear wastes, the bioethics of genetic engineering, issues surrounding genetic counseling, and the biology of racial differences.

163-20 Science in Daily Life (L)

Science in Daily Life, which is intended for 9th and 10th grade high school students, should provide in-depth laboratory and field explorations of a variety of scientific concepts, theories, and principles which relate to the students' personal needs. The phenomena studied should relate to individual and family health needs and to the problems students will encounter as consumers in a scientific and technological society.

163-25 Science in Modern Industry (L)

Science in Modern Industry should provide students with opportunities to observe and understand the scientific research, development, and control processes used in industry. The course should incorporate concepts and skills from the biological sciences, chemistry, physics, geology, meteorology, and oceanography. It should be designed to accomplish either or both of the following objectives: (1) to provide students with an appreciation of the role of science and technology in today's complex industrial system, or (2) to provide students with opportunities to explore science- and technology-related career opportunities.

163-30 Science Projects

Science Projects should provide students with opportunities to undertake independent in-depth scientific study of one or more specific science problems which interest them. Students enrolled in the course should produce a product such as a science fair project, a publishable scientific paper, or some other suitable presentation of their research findings. Successful completion of or concurrent enrollment in a third year of high school science should be a prerequisite for the *Science Projects* course.

(B) BIOLOGICAL SCIENCE

(1) GENERAL BIOLOGY COURSES

164-05 Biology Level I (L)

Biology Level I should provide for the study, through regular laboratory and field investigations, of the structures and functions of living organisms and their interactions with their environment. The course should include a study of the function and processes of cells, tissues, organs, and systems within various species of living organisms as well as the roles and interdependencies of organisms within populations, communities, eco-systems, and the biosphere. Supporting materials and activities for the course should be selected to emphasize an understanding of the history of the development of biological knowledge, to explore the uses of biological knowledge in various careers, and to resolve problems related to personal needs and social issues.

164-10 Biology Level II (L)
(formerly Advanced Biology)

Biology Level II should provide students with opportunities to pursue laboratory, field, and literature investigations into the internal structures, functions, and processes of living organisms and the environmental interactions of these organisms. The course should refine the methods of scientific inquiry and problem resolution.

164-15 Basic Biological Science

Basic Biological Science should provide students with opportunities to perform laboratory and field investigations of biological principles which apply to the personal well-being of the students and their community, as well as to the interactions of living organisms with the environment. Although a textbook will provide most of the supporting readings and activities for the course, content selection should be based on developing those problem resolution skills and strategies which the students will need to become effective decision makers in a scientific and technological society. This course is designed for those students who could find it more beneficial than the *Biology Level I* course.

(ii) SPECIALIZED BIOLOGICAL COURSES

164-25 Aquatic Biology (L)

Aquatic Biology should involve students in extended laboratory and field investigative study of aquatic organisms, their interdependencies and their interactions with their environment as well as a study of the ways in which the structures and mechanisms of these organisms are similar to or different from nonaquatic organisms. The course may focus either on fresh water ecosystems or on a comparison of fresh and salt water ecological systems.

164-30 Biomedical Education (L)

Biomedical Education, a two to six semester program, should provide students with opportunities to study and apply selected scientific concepts which are useful in health careers. These concepts may be from the areas of biophysics, electronics, computer science, chemistry, the health sciences, nutrition, physics, and physiology. The program should provide students with numerous opportunities to observe applications of the concepts and procedures which they are studying and to perform laboratory investigations of the underlying scientific principles. Successful completion of at least one year of high school science should be a prerequisite for the *Biomedical Education* program.

164-35 Botany (L)

Botany should provide students with opportunities to perform laboratory and field investigation of various species of plants, the systems and subsystems of plants, their interactions with other organisms and their environments, as well as to study their similarities to and differences from organisms in other biological kingdoms. The course should involve students in hands-on investigations of the taxonomy, morphology, and/or histology of plants. Successful completion of one year of general biology should be a prerequisite for *Botany*.

164-40 Comparative Anatomy (L)

Comparative Anatomy should be designed for students who desire to develop a greater comprehension of the anatomy and physiology of various animals, particularly as they relate to the morphology and histology of the human body. Students selecting this course are likely to pursue further study and/or application of this subject matter, usually in preparation for careers in animal or human health services. The course should include hands-on investigations of preserved specimens or media records of their structures and behaviors. Successful completion of one year of general biology should be a prerequisite for *Comparative Anatomy*.

164-45 Ecology (L)

Ecology should provide students opportunities to study the interdependencies of individual organisms and populations with biological communities, ecosystems and the biosphere as well as the interactions of these organisms with their physical environment. The students should examine and identify existing interdependencies within a specific biological community and, if possible, compare current populations with past records of the same geographic community. Successful completion of one year of general biology should be a prerequisite for *Ecology*.

164-50 Genetics (L)

Genetics should provide students an understanding of the potentials, limitations, and hazards of gene slicing and splicing as well as an understanding of: the mechanisms and laws of heredity in sexual and asexual reproduction; natural, environmental, or chemically produced mutations; and the technology of genetic manipulation. Students should be provided laboratory experiences with the reproductive cycles and genetics of non-pathogenic organisms. Two semester courses in *Genetics* should also provide students with opportunities to examine some of the ethical questions related to development and utilization of genetic technology (bioengineering) in various organisms, including the human species. Successful completion of a general biology course and a physical science course which includes the study of chemical bonding mechanisms should be prerequisites for *Genetics*.

164-55 Human Physiology (L)

Human Physiology should be designed for students desiring greater understanding of the structure and function of systems and subsystems of the human body, particularly in preparation for careers in health and/or recreational services. The course should provide students with opportunities to perform laboratory investigations of the morphological, histological, and cytological phenomena studied.

164-60 Marine Biology (L)

Marine Biology should provide students with opportunities to investigate marine organisms, their interdependencies and their interactions with their environment as well as to investigate their similarities to and differences from other organisms.

164-65 Microbiology (L)

Microbiology should provide for the study of the structure, function, and ecology of micro-organisms. Although students cannot be permitted to undertake investigations of pathogenic organisms, they should have opportunities to use many of the tools and methods of microbiological study to investigate non-pathogenic organisms.

164-70 Zoology (L)

Zoology should provide for investigations of the various species of animals, their systems and subsystems, their interactions with other organisms and their environment, and their similarities to and differences from organisms in other biological kingdoms. The course should provide laboratory investigation of preserved specimens for the study of animal taxonomy, morphology, and/or histology. When living or preserved specimens are not available, media records of the animal structures, behaviors, and ecological functions should be utilized. Successful completion of one year of general biology should be a prerequisite for *Zoology*.

(iii) APPLIED BIOLOGY COURSES

164-80 Practical Biological Science (L)

Practical Biological Science should provide students with opportunities to have laboratory and field experiences involving specific applications of biological principles to everyday problems. The emphasis of the course should be on developing the skills and knowledge which the students will need to become discriminating consumers in a scientific and technological society. A variety of topics and skills may be included in this course, but they should be tailored to meet the individual needs, interests, and abilities of the students. A textbook should not serve as the basis of course content or the major reading resource for *Practical Biological Science*. Rather, the course content should emerge from a series of first-hand investigations of living organisms. Reading materials for the students should be taken from a variety of sources, such as public information and commercial pamphlets, current magazines, trade books and cookbooks that are of interest to the students and are written at a level which they can comprehend. *Practical Biological Science* should be designed for the students who can could find it more beneficial than *Biology Level I*.

164-85 Animal Science (L)

Animal Science should provide students with opportunities to learn and apply the principles of animal life support systems to the care and maintenance of pets, other domesticated animals, and/or wildlife habitats. The objectives of this course should emphasize developing an understanding of animals and their needs rather than the training of animal caretakers.

164-90 Plant Science (L)

Plant Science should provide the students with opportunities to learn and apply the principles of plant life support systems to the selection and management of plants. Techniques and strategies to be studied may include applications to gardening, lawn care, houseplant care, landscaping, environmental improvement, or the establishment, re-establishment and/or maintenance of natural environments. The objectives of this course should emphasize developing an understanding of plants and their needs rather than the training of horticulture workers.

(C) EARTH/SPACE SCIENCES

(i) GENERAL EARTH/SPACE SCIENCE COURSES

165-05 Earth/Space Science Level I (L)

Earth/Space Science Level I should provide for study of the lithosphere, atmosphere, and hydrosphere of the earth as well as a study of celestial phenomena and their effects on the earth's environment. The study would normally include phenomena from geology, meteorology, climatology, oceanography, and astronomy. The course should emphasize the study of the energy at work in forming and modifying earth materials, land forms, and continents through geological time. Laboratory study, field trips, and local geological features should be used in the course whenever feasible. When phenomena cannot be directly observed, media records from which students can collect data about these phenomena should be made available. Supporting materials and activities for this course should be selected to emphasize an understanding of the history of the development of the earth/space sciences, to explore the uses of knowledge of the earth and its environment in various careers, and to resolve problems related to personal needs and social issues.

165-10

Earth/Space Science Level II (L)
(formerly Advanced Earth/Space Science)

Earth/Space Science Level II should provide for extended laboratory, field, and literature investigations regarding earth and/or space science topics. The course should utilize concepts from other scientific disciplines to assist the students in synthesizing theoretical models of the earth and its environment in the macrocosm, as well as analyzing the processes at work in forming and modifying the earth.

(ii) SPECIALIZED EARTH/SPACE SCIENCE COURSES

165-20

Astronomy (L)

Astronomy should provide for an investigative study of phenomena observable within the macrocosm and their syntheses into theoretical, physical, and mathematical models. Students should be provided direct experience with many of the tools and methods of astronomical study. Successful completion of two years of high school science should be a prerequisite for *Astronomy*.

165-25

Geology (L)

Geology should involve students in extended investigations of the concepts, methods, and theoretical models regarding the earth's structure and formation. When field examinations of local geological features illustrating the concepts being studied are not possible, models, specimen geological columns, and media records should be secured for student investigation.

165-30

Meteorology (L)

Meteorology should involve students in an investigation, through the application of the tools and methods of meteorologic study, of the forms of energy affecting weather and climate.

165-35

Oceanography (L)

Oceanography should involve the investigation of the composition of the oceans and larger bodies of water on the earth's surface, the energy flow in these water masses, and their life support and ecological systems. When first-hand observations of hydrological phenomena are not feasible, miniaturized models should be constructed and investigated along with media records of the actual physical and biological phenomena.

165-40

Soil Science (L)

Soil Science should provide the student with an understanding of the nature of soil, its sources, the differences in soils and how these differences can influence the support of various organisms. Students should be provided opportunities to perform laboratory and field investigations of a variety of soil types and their life support qualities.

(D) PHYSICAL SCIENCE

(i) GENERAL CHEMISTRY COURSES

167-03

Chemistry Level I (L)

Through laboratory investigation of matter and its chemical reactions, conducted in *Chemistry Level I*, students should synthesize useful models of the structure of matter and the mechanisms of its interactions. The course should be organized around the concepts of atomic structure, bonding, stoichiometry and other phenomena that accompany chemical reactions. As students participate in laboratory activities, they must learn and use appropriate safety precautions. Supporting materials and activities for the course should be selected to emphasize an understanding of the history of chemistry, and to explore the uses of chemical knowledge in various careers, and to resolve problems related to personal needs and social issues.

167-06

Chemistry Level II (L)
(formerly Advanced Chemistry)

Chemistry Level II should provide for extended laboratory and literature investigation of chemical reactions of matter in living and non-living materials. The course should stress the unifying themes of chemistry, the development of useful physical and mathematical models of matter and its interactions, and the methods of scientific inquiry.

167-09

Practical Chemistry (L)

Practical Chemistry is an alternative to *Chemistry Level I* for students who wish to learn about the basic chemical processes experienced and used at home and at work. The students should be provided opportunities to make laboratory investigations of these processes and encouraged to formulate models which will remain useful throughout life. As students participate in studies and applications of these processes, they should learn and utilize appropriate safety precautions.

(ii) GENERAL PHYSICS COURSES

167-23

Physics Level I (L)

Physics Level I should provide for the laboratory study and synthesis of the fundamental concepts of mechanics, wave motion, heat, light, electricity, magnetism, electromagnetism, and atomic and nuclear physics. Supporting materials and activities should be selected to emphasize the history of physics, its role in the birth of technology; to explore the uses of its models, theories, and laws in various careers; and to resolve problems related to personal needs and social issues.

167-26

Physics Level II (L)
(formerly Advanced Physics)

Physics Level II should provide opportunities for students to conduct extended laboratory and literature investigations of physical phenomena and synthesize these investigations into theoretical models which are useful in understanding the interacting systems of the macro- and microcosms.

(iii) GENERAL PHYSICAL SCIENCE COURSES

167-32 Basic Physical Science (L)

Basic Physical Science should provide students with opportunities to investigate and apply matter/space/energy relationships to phenomena encountered in real life. Although a textbook will provide most of supporting readings and activities for the course, content selection should be based on developing the problem resolution skills and strategies which the students will need to become effective decision makers in a scientific and technological society. This course is designed for those students who could find it more beneficial than the standard chemistry and physics courses.

167-34 Introductory Physical Science (L)

Ninth grade *Introductory Physical Science* should provide students with opportunities to perform laboratory investigations of phenomena ordinarily studied in chemistry, physics, and related sciences and synthesize these into basic concepts, theories, and models which will be useful in a more in-depth, subsequent study of biology, chemistry, physics, and/or the earth/space sciences. In addition to providing this knowledge, the course should emphasize the development of the problem resolution and decision-making skills and strategies which students will need in a scientific and technological society.

167-36 Advanced Physical Science (L)

Advanced Physical Science should provide 11th or 12th grade students with in-depth investigations of physical and/or mathematical models and hypotheses useful in examining the mechanisms governing the behavior of the universe and the interrelationships of its component parts. The course may serve: (1) students who desire an upper level study of chemistry and physics, but do not wish to pursue a full year study of either course; and/or (2) students desiring to examine the problems involved with technological applications of the physical sciences.

(iv) SPECIALIZED PHYSICAL SCIENCE COURSES

167-41 Analytical Chemistry (L)

Analytical Chemistry should provide students opportunities to refine their laboratory techniques through the qualitative and/or quantitative analysis of chemical samples and to increase their knowledge of basic chemical processes.

167-43 Atomic Physics/Physical Chemistry (L)

Atomic Physics/Physical Chemistry should provide students with an understanding of the internal structure of the atom through laboratory investigations not normally performed in the regular chemistry or physics laboratory.

167-45 Bio-Chemistry (L)

Bio-Chemistry should provide students with opportunities to investigate chemical reactions essential to life processes. Students should duplicate many of these reactions in the laboratory.

167-47 Nuclear Physics (L)

Nuclear Physics should provide students an opportunity to investigate the interacting forces affecting subnuclear particles in greater depth than ordinarily studied in a regular physics course. The students should conduct simple experiments in which these forces can be observed and should examine and analyze recorded displays of nuclear interactions. Students should also be provided opportunities to observe the research machines of nuclear physics.

167-49 Organic Chemistry (L)

Organic Chemistry should provide students with opportunities to explore the chemistry of carbon compounds in greater detail than ordinarily possible in a general chemistry course. Emphasis should be placed on the study of the chemistry of nutrition, natural and synthetic fibers, solvents, cleansing agents, and polymeric fabrication. As students investigate these reactions in the laboratory, they should also consider how their natural and industrial uses affect their life styles and environment.

(v) APPLIED PHYSICAL SCIENCE COURSES

167-51 Computer Technology (L)

Computer Technology should provide students with general knowledge and experience in working with the design of the electronic components and the circuitry of electronic calculators, computers, and other automated devices. This course does not meet the state's computer literacy requirement; rather, it should provide students in-depth knowledge of the scientific principles and laws underlying micro-chip technology and its potential utilization.

167-52 Energy Resources (L)

Energy Resources should provide students with opportunities to examine our energy resources and their limitations. Students should also explore, develop, test, and evaluate optional energy sources and strategies, and procedures for conserving current energy sources.

167-53 Practical Physical Science (L)

Practical Physical Science should provide students with opportunities to have laboratory and field experiences involving specific applications of chemical, physical, and related earth/space science concepts to everyday problems. The emphases of the course should be on developing the skills and knowledge which the students will need to become discriminating consumers and productive workers in a scientific and technological society. A variety of topics and skills may be included in this course, but they should be tailored to meet the individual needs, interests, and abilities of the students. A textbook should not serve as the basis of course content or the major reading resource for *Practical Physical Science* students. Rather, the course content should emerge from a series of first-hand investigations of physical, chemical and/or technological phenomena. Reading materials for the students should be selected from a variety of sources such as public information and commercial pamphlets, current magazines, tradebooks, users' guides and technical manuals that are of interest to the students and are written at a level they can comprehend. *Practical Physical Science* should be designed for those students who could find it more beneficial than the standard physical science courses.

167-54 Principles of Electronic Communications (L)

Principles of Electronic Communications should involve students in the investigation and application of methods of harnessing the electromagnetic spectrum to facilitate, enhance, and speed human communications. This course should not duplicate nor replace studies in other areas dealing with the effective use of electronic media, but should focus on the science and technology of message transmission.

167-55 Principles of Electronics (L)

Principles of Electronics should provide an investigation of the properties and behaviors of electrons in various environments and a study of the technological applications of these phenomena. Students should be provided opportunities to observe demonstrations of these electromagnetic phenomena and to design electromagnetic devices. This course should not duplicate nor replace courses designed to train students in the use and maintenance of electronic equipment, but should focus on the underlying scientific phenomena.

167-56 Principles of Flight/Space Travel (L)

Principles of Flight/Space Travel should provide students an understanding of the physics and mathematics of flight and/or space travel. The course may also include a study of the adaptations and compensations of biological organisms to survive in such environments. Students should either directly observe, project from models, or review actual data regarding the phenomena studied, as well as design and test model vehicles for aerospace travel. This course should not duplicate or replace courses designed to train students to maneuver and/or maintain aeronautical vehicles, but should focus on the underlying scientific principles of their design and operation.

167-57 Principles of Photography (L)

Principles of Photography should provide students with opportunities to investigate and to apply chemistry and physics to the processes of recording and reproducing images on photographic films. The course may also include a study of various electronic means of image reproduction. This course should not duplicate or replace the study of photography as an art form or as a communication skill but might be supplemental to either or both of these studies.

167-58 Radiation Physics (L)

Radiation Physics should involve the students in investigations of the various forms of higher energy radiation, their biological interactions, and their technological applications. These investigations should include an examination of the potentials of radiation in therapy and food preservation, as well as the radiation hazards that exist in a variety of natural and technological environments.

Health, Physical Education and Safety

(7) HEALTH, PHYSICAL EDUCATION AND SAFETY

HEALTH AND SAFETY EDUCATION

Kindergarten - Personal Growth Experiences 000-60

Personal growth experiences should provide learning experiences that will build and maintain positive student self-image. These experiences should aid the students in establishing health practices and attitudes essential to attaining and maintaining good health and well-being. Attention should be given, but not necessarily be limited to, the following topics: nutrition; dental health; disease control and prevention; accident prevention; fire, medicine and playground safety; emergency assistance; social, emotional, and mental health; and health relationships in the home, neighborhood, school, and community.

Personal growth experiences for kindergarten students should also include opportunities for exploration and discovery through physical activities designed to develop the fundamental movement patterns of stability (S), locomotion (L), and manipulation (M). Movement patterns stressed at this level should be: (S) - gestures, static and transitional postures; (L) walking, running, jumping, skipping, and climbing; and (M) - rolling, throwing, catching, kicking, trapping, and striking. These movement patterns should be dealt with in relative isolation of one another. Activities which encourage problem solving, as well as games, rhythm, and gymnastic exercises should be utilized. An interdisciplinary approach should be used to correlate and reinforce concepts with other areas of the curriculum when appropriate.

Grades 1-3 010-30, 020-30, 030-30

The primary level health and safety education program should provide for the coordinated and sequential development of knowledge, concepts, skills, behaviors, and attitudes related to the students' present and future health and well-being. The ten major content areas of a comprehensive school health education program include personal health, mental and emotional health, prevention and control of disease, nutrition, substance use and abuse, accident prevention and safety, community health, consumer health, environmental health, and family life education. The primary level instructional program should provide opportunities for students to interact with the environment to develop a strong self-concept. It should help students understand, accept, and value themselves and others as persons who are alike in some ways and different in others. This instructional program should help students begin and continue patterns of health-related behaviors that are likely to contribute to optimal individual, family, and community health. A variety of learning experiences should be utilized to maximize internalization of behaviors conducive to good health.

Grades 4-6 040-30, 050,30, 060-30

The upper elementary level health and safety education program should provide for the coordinated and sequential development of knowledge, concepts, skills, behaviors and attitudes related to the students' present and future health and well-being. The ten major content areas of a comprehensive health education program include personal health, mental and emotional health, prevention and control of disease, nutrition, substance use and abuse, accident prevention and education. Each student should have the opportunity to develop competencies to deal positively and creatively in handling life situations related to physical, mental-emotional, and social health. Students should also have opportunities to develop the ability to initiate individual and community action to maintain and improve health. A variety of learning experiences should be utilized to maximize internalization of behaviors conducive to good health. The sequence of learning experiences should progress from an emphasis on the development of skills and basic knowledge in the early grades to an increased emphasis on concept and attitude formation in the later grades.

Grades 7-8 070-40, 080-40

The junior high/middle school health and safety education program should continue to provide for the coordinated and sequential development of knowledge, concepts, skills, behaviors, and attitudes related to the students' present and future health and well-being. The ten major content areas of a comprehensive health education program include personal health, mental and emotional health, prevention and control of disease, nutrition, substance use and abuse, accident prevention and safety, community health, consumer health, environmental health and family life education. Instruction should provide opportunities which will enable adolescents to act on behalf of themselves and others in ways that promote good health. Skills to be developed include self-assessment, communication, decision-making, health self-management, and health advocacy. Focus should be on both immediate health needs and long-term consequences of behaviors. A variety of learning experiences should be utilized to maximize internalization of behaviors conducive to health.

Secondary

(A) HEALTH AND SAFETY EDUCATION COURSES

172-05 Health and Safety - Semester 1

Health and Safety - Semester 1 should provide for the continued development of the basic knowledge, concepts, and skills needed to adopt or reinforce healthful attitudes, decisions, and habits. The course should provide students with in-depth learning experiences concerning, but not necessarily limited, to: accident prevention and safety, including emergency care and first aid; consumer health decisions; the understanding of personal health as it pertains to the growth and development of body systems; nutrition; physical fitness; the prevention and control of diseases; substance use and abuse; social, emotional, and mental health; family life education; community health; and the maintenance of healthful and safe environments. Since this is the course which most students will use to meet the health and safety graduation requirement, it should emphasize the development of interpersonal communication, problem-solving, and decision-making skills as they relate to student wellness.

172-10 Health and Safety - Semester 2

Health and Safety - Semester 2 should provide students with further opportunities to develop their understanding of the way in which various behaviors, habits, and environments are related to a productive life. The course may include a variety of topics or it may provide an in-depth study of specific health and safety topics including the study of local, state, national and/or worldwide health concerns. The course should also provide students with opportunities to explore health related careers.

172-15 Human Development and Family Health

Human Development and Family Health should provide students with opportunities for in-depth study of topics related to their future responsibilities in home and family life. The course should provide students with learning experiences related to: recognition of the stages in the life cycle and the manner in which these stages affect interpersonal relationships; preparation for marriage; choices in parenting; the family's function within our culture; and health care for members of the family. The course should emphasize the development of skills needed in interpersonal communication, decision-making, and self-management.

172-20 Substance Abuse Education

Substance Abuse Education should include objective descriptions of alcohol, tobacco, drugs, sedatives, narcotics, and other chemical substances. The course should also provide students with an understanding of the physical, mental, psychological, and social effects of such substances on the human system, including effects on the family unit and society. The course should aid students in discriminating between prescriptive and non-prescriptive, nutrient and non-nutrient, and legal and illegal substances, as well as cause them to recognize that persons being medicated by some of these substances may also abuse them. The course should provide students with insight regarding the needs which individuals seek to fulfill through the use of these substances and provide opportunities for students to explore and evaluate alternatives for fulfilling these needs. Additionally, students should become aware of available community resources relating to prevention, intervention, or treatment of substance abuse. The course should meet the needs of individual students and help students to develop positive self-concepts and to make responsible decisions and choices regarding these substances.

172-25 Driver Education (L)*

Driver Education should provide students with the knowledge needed to assist them in developing the skills, habits, and attitudes necessary to interact safely and effectively with other highway users in a wide variety of environments, situations, and conditions. The course should always provide a combination of classroom instruction, in-car observation, and behind-the-wheel experiences in on-street environments. Whenever possible, the on-street observations and behind-the-wheel experiences should be supplemented with off-street, multiple car driving range and/or simulation experiences as limited by Rule D (510 IAC 5-1). The course should provide for, but not necessarily be limited to, student learning related to: driving skills; traffic laws; the laws of nature; reasonable driving attitudes; occupant protection; the effect of physical and mental conditions of the driver, including the hazards of alcohol and/or drug use; adverse driving conditions; vehicle purchase, insurance, and maintenance; the ecology and energy efficiency of various transportation modes; energy efficient driving techniques; and sharing the roadway with other users, including motorcyclists and pedestrians.

172-30 Motorcycle Safety Education (L)

Motorcycle Safety Education should consist of both classroom instruction and laboratory experiences, including experiences on an off-street, multi-vehicle driving range and in either in-traffic or simulated traffic situations, or both. The course should provide for, but not necessarily be limited to, student learning related to: motorcycle controls; protective equipment; riding skills; basic maneuvers; basic street riding; advanced riding skills; vehicle selection, insurance, and maintenance; traffic laws; the laws of nature; adverse riding conditions; sharing the roadway with other users, including pedestrians; the transport of passengers and other loads; and the effects of the physical and mental condition of the rider, including the hazards of alcohol and drug use.

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* Any course which is suffixed with a capital "L" in parentheses is to be presented as a laboratory course.

PHYSICAL EDUCATION

Grades 1-3 - Motor Skills Development 010-30, 020-30, 030-30

The primary grades co-educational motor skills development program should provide coordinated movement experiences similar to those provided at the kindergarten level. The program should continue to emphasize the generality of movement rather than accuracy and precision. Games, rhythm activities, stunts and tumbling, along with problem solving and self-testing activities, should be used in developing locomotive, rhythmic, stability, manipulative and, where available facilities exist, aquatic skills. The motor skills development program should also seek to integrate, correlate, and reinforce some of the academic areas which include math, science, and language arts.

Grades 4-6 040-35, 050-35, 060-40

The intermediate level physical education program should provide co-educational experiences which are designed to refine fundamental movement patterns into more complex and specific forms. Through lead-up games, the movement patterns of stability, locomotion, and manipulation should be combined and applied in a general way to sport, rhythmic, gymnastic and, where facilities are available, aquatic activities.

Grades 7-8 070-45, 080-45

At the junior high/middle school level emphasis in the physical education program should be placed on developing specific sport skill abilities through drills and co-educational participation in a variety of individual, dual, and team sports. At this level, greater stress should be placed on form, accuracy, rules, and strategies. Building health and skill-related fitness should also be integrated into the development of specific sport skills.

Grades K-8 - Adapted Physical Education

An adapted physical education program should be available to kindergarten, elementary and middle school students with special mental, physical, sensory or neurological problems. This program should provide, in a suitable environment, a variety of developmental activities, games, sports and rhythms appropriate to the interest, capabilities, and limitations of these students. The sequence of learning experiences should be carefully planned to fulfill the growth, development and behavioral needs of students within the parameters of acceptable patterns of personal behavior and interpersonal relationships. The adapted physical education program may also include alternatives for students having spiritual or cultural objections to the regular motor skill development and physical education programs.

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(B) PHYSICAL EDUCATION**

(i) BASIC PHYSICAL EDUCATION COURSES

174-05 Basic Physical Education (L)

Basic Physical Education should provide a co-educational opportunity for the continued systematic development of basic activity skills through a variety of activities. These offerings should include individual and team sports, lifetime sports, a variety of outdoor recreational activities, individual self-testing activities, creative movement experiences, structured and unstructured rhythmical experiences and, where facilities are available, aquatic activities. Since this is the course which most students will use to meet the basic physical education graduation requirement, the course should include a variety of activities which can be used to develop and maintain an optimal level of physical fitness.

174-10 Adaptive Physical Education (L)

Adaptive Physical Education should provide an alternative to the basic physical education course for students with special mental, physical, sensory, or neurological problems. The course should include, within the least restricted environment, a variety of developmental activities, games, sports, and rhythms appropriate to the interests, capabilities, and limitations of these students. *Adaptive Physical Education* may also provide an alternative for students having spiritual or cultural objections to the basic physical education course. This course may be used in lieu of the basic physical education course to meet the high school basic physical education graduation requirement.

(ii) ADVANCED PHYSICAL EDUCATION COURSES

175-05 Advanced Physical Education (L)

Advanced Physical Education should provide an opportunity for the student to develop an interest in lifetime and recreational sports. It should also incorporate a background study of basic physical developmental concepts and principles. The course should assist students in understanding the need to maintain good physical fitness practices.

175-10 Specilaized Physical Education (L)

Specialized Physical Education should provide for the development of specific skills necessary for various life-long physical fitness activities, sports, or sport clusters. These courses should also include a study of the principles of physical development involved in the specific activity or sport and an examination of its official rules. These courses are not to be used to prepare students for participation in activities related to interscholastic competition.

**Preparation for interscholastic completion may not be counted for physical education credit.

Dance (L)

Dance should develop the students' abilities to express perceptions, feelings, images, and thoughts through dance movement and provide opportunities for the students to develop knowledge and appreciation of our multi-cultural dance heritage. It should also provide students with opportunities for personal growth through experiences with rhythmic fundamentals, creative rhythms and folk, square, and social dance. The course should provide students with opportunities to: understand the basic elements of rhythm; move efficiently through space in controlled rhythmical motions; develop and perform creative movement sequences in response to rhythmic and/or musical accompaniment; solve rhythmic problems creatively through expressive movement; understand how the preserved artistic communication of earlier people assists us in understanding our past; express the present through rhythmic movement; and ultimately, recognize and utilize dance as a method of self-expression.

Art

(8) ART

Kindergarten - Creative Experiences 000-35

Creative experiences should include music, visual art, crafts, creative movement, and drama. These experiences should include activities which emphasize sensorimotor development; integration of the mind, body, and emotion in learning experiences; development of multi-sensory avenues of perception; and exploration of individual uniqueness through individual and group processes. Activities which foster the students' abilities to create, experience, analyze, and reorganize through intuitive, emotional, and verbal responses should be provided in order to expand the students' self-discipline, motivation, positive self-image, and creative thinking. Materials, media, and forms of expression should be in keeping with the students' psychomotor development and should offer opportunities for the students to succeed.

Grades 1-3 010-25, 020-25, 030-25

The elementary art program should provide sequenced learning activities to encourage interest in all of the arts. Activities and experiences in the visual arts should be designed to develop the students' abilities to: 1) perceive and understand the environment through investigation, awareness of elements, the discovery of relationships, and the invention of visual images; 2) respond aesthetically through perceptual, affective, and cognitive means to the arts, the environment, and to human sensitivities; 3) think creatively through individual and group problem-solving experiences; 4) express themselves creatively in a wide variety of two and three dimensional media and other vehicles of communication, through the development of manipulative, perceptual, and cognitive skills; and 5) make sound aesthetic judgments through experiences that provide opportunities to observe and verbalize the aesthetic characteristics of works of art. Instruction should provide for experiential, manipulative, and problem-solving activities which facilitate the students' abilities to understand themselves and their relationships to the "manmade" and natural environments. These activities should utilize a wide variety of media, communication, materials, and experiences.

Grades 4-6 040-80, 050-80, 060,80

The art curriculum for grades 4-6 should allow students to apply the art skills which have been learned in the primary grades. Competence in using basic art materials, media, and techniques should be developed prior to the fourth grade. The intermediate art curriculum should provide opportunities for students to develop visual symbols that are compatible with their increased perceptual abilities. At the intermediate level, students should have experiences that provide opportunities for them to apply their art skills to other subject areas and to use them in integrated instructional units. Experiences at this level should include, but not be limited to, the following: 1) making aesthetic responses through interactions with works of art, nature, and objects in the total environment; 2) making informed judgements through comparing, analyzing, and interpreting works of art; 3) talking about works of art by using language in expressive ways; 4) studying the aesthetic values and creative art efforts of a wide variety of cultures, through painting, artifacts, and objects used in daily living; 5) working with techniques, materials, and processes in painting, drawing, constructing, printmaking, crafts, graphics, film animation, and environmental design that develop the students' abilities to express ideas, feelings, and values; and 6) exposure to artists and other professionals in art related careers, in order to understand the role of art in contemporary society.

Grades 7-8 070-30, 080-30

Art instruction in grades 7 and 8 should provide sequenced activities with in-depth instruction in a wide variety of media expression. The program should include opportunities to explore, experiment, and develop skills using advanced processes and techniques. Activities should emphasize the principles and elements of visual expression, utilizing two and three-dimensional materials. Individual and group activities that develop skills in critical inquiry should be included. Problem-solving activities that develop creative thinking should be an integral part of the art program at this level. Experiential activities should be provided in and out of the classroom that develop the students' abilities to understand themselves and their relationships to the environment. The following should be emphasized through varied activities: two dimensional experiences including drawing and painting with different mediums and instruments; three dimensional experiences, including sculpture constructions and ceramic design; increased art vocabulary through group discussion and the study of art history; and exposure to art career opportunities through research and study of the role the arts play in contemporary society.

Secondary

(A) GENERAL ART COURSES

181-05, 181-10 Basic Art, Levels I and II (L)*

Basic Art I and II should increase the students' abilities to use and understand the principles and elements of visual expression. This course should include: experimentation with a wide variety of mediums, techniques, and materials; individual and group problem-solving activities which develop creative thinking and critical inquiry skills; experiences that increase understanding of the social and historical foundations of art; and activities that increase the students' perceptual skills in order to make sound aesthetic judgements.

181-15, 181-20 Advanced Art, Levels I and II (L)

Advanced Art I and II should include studio experiences designed to develop in-depth skills in a variety of techniques, mediums, and processes. Both two and three dimensional materials should be utilized in student-designed problems which are solved through skillful use of media and the principles and elements of visual design. Opportunities to develop an understanding of the role of the professional artist and the role of the arts in contemporary society should be provided.

(B) HISTORICAL ART COURSES

183-05 Art and Ideas (L)

Art and Ideas should provide opportunities for students to explore the relationship of art to other areas of creativity and thought, including major movements and artists in the Western world. The course should provide an overview of the tradition of the humanities and give students opportunities to understand the major centers of civilization at times of high cultural achievement.

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*Any course which is suffixed with a capital "L" in parentheses is to be presented as a laboratory course.

183-10 Art Appreciation

Art Appreciation should provide opportunities for students to survey multiple facets of historical and contemporary art from a wide variety of civilizations. The course should stress the achievements of mankind throughout numerous eras and help students know how to fully experience painting, sculpture, and art objects.

183-15 Contemporary Art

Contemporary Art should provide students with opportunities to better understand current trends in the visual arts as they relate to contemporary societies. The course should include activities which help students understand the role of artists and the ways in which their works have influenced contemporary thinking.

183-20 Environmental Art (L)

Environmental Art should provide opportunities for students to develop perceptual and critical thinking skills as they relate to art and the environment, including, but not limited to, studies in human scale and the human use of exterior and interior space. Experiences which provide opportunities for students to discuss design elements in works of art, nature, and objects in relation to the total environment should also be included.

183-25 Multicultural and/or Historical Art

Multicultural and/or Historical Art should provide opportunities to increase student understanding of the historical and cultural foundations of art. The course should provide a variety of works of art and accomplishments of contemporary, historic, and prehistoric cultures, in order to increase student understanding of art as a reflection of history.

(C) THREE DIMENSIONAL ART COURSES

185-05 Ceramics (L)

Ceramics should provide opportunities for students to develop skills and understand techniques for working with clay as a medium. This includes the study of basic hand building, use of the potter wheel, glazes, slips, bisque, and glaze firing.

185-10 Crafts (L)

Crafts should provide opportunities for students to explore a wide variety of craft techniques and materials in order to better understand the aesthetic, functional, and historical basis of such art forms. The course should include activities which increase the students' abilities to apply design elements and principles using skills in craftsmanship. Craft processes such as weaving, construction, stitchery, batik, and jewelry should be included.

185-15 Jewelry (L)

Jewelry should provide opportunities for students to develop a working knowledge of jewelry making through the use of a wide variety of materials, tools, and techniques. Techniques should include sawing, soldering, finishing, and other basic processes used in constructing jewelry.

185-20 Metal Design (L)

Metal Design should provide opportunities for students to experiment with a wide variety of metals, tools, and techniques in order to develop an understanding of two and three dimensional design qualities. Basic techniques of forming metal along with an introduction to the decorative processes used in metal design should be included.

185-25 Sculpture(L)

Sculpture should provide opportunities for students to understand the fundamentals of sculpture while working with a wide variety of mediums and utilizing the elements of design as they relate to three dimensional forms. The course should include activities which help students to model shapes into representational and abstract objects; to construct objects and simple structures by joining a variety of forms; and to carve by using hand tools.

185-30 Three Dimensional Design (L)

Three Dimensional Design should increase student understanding of the principles of design as they relate to three dimensional materials. This course should include the use of basic art elements to organize space on a three dimensional plane. Basic tools and techniques with an emphasis on craftsmanship should be utilized by the students.

185-35 Weaving/Fiber Design (L)

Weaving/Fiber Design should provide opportunities for students to work with a variety of materials and techniques in order to understand the principles of weaving and the creative aspects of functional techniques and materials. Fundamentals of loom and off loom weaving should be included, with an emphasis on design, color, texture, and three dimensional form.

(D) VISUAL DESIGN COURSES

187-05 Architectural Design (L)

Architectural Design should provide opportunities for students to understand architectural characteristics throughout history and to develop skills in architectural drawing and design through a variety of problem-solving activities.

187-10 Design and Composition (L)

Design and Composition should provide opportunities for students to develop skills in and an understanding of the fundamentals of design. An emphasis should be placed on problem recognition and solution through comprehensive application of design principles. Activities which increase the students' abilities to design objects used in everyday living such as fabrics, wrapping paper, tools, furniture, and mechanical devices should be included.

187-15 Drawing (L)

Drawing should provide opportunities for students to increase perceptual and expressive skills through the use of a wide variety of drawing tools and media. Activities which increase the students' abilities to use the drawing techniques of brush drawing, shading, and contour should be included.

187-20

Painting (L)

Painting should provide opportunities for students to understand the fundamentals of painting through the use of a wide variety of mediums and techniques. Historical references and current trends should be included. Activities which increase the students' abilities to imaginatively transform personal experiences into art forms through mixed media, watercolor, oil, acrylic, and other painting mediums should be included.

187-25

Printmaking (L)

Printmaking should provide opportunities for students to understand the fundamentals of a variety of printmaking methods, materials, and techniques. This course should include relief, intaglio, and lithographic techiques. Activities which provide opportunities for students to produce prints and to develop concepts of using techniques involving variation in thickness and thinness of line should be included.

187-30

Photography and/or Filmmaking (L)

Photography and/or Filmmaking should provide opportunities for students to understand the fundamentals of photography and filmmaking through the use of a variety of cameras and development techniques. Activities which increase the students' abilities to produce still photographs, film, television or animation sequences to communicate ideas of realism, illusion of movement, or story content should be included.

(D) COMMERCIAL ART COURSES

189-05

Calligraphy/Lettering (L)

Calligraphy/Lettering should provide opportunities for students to study the decorative, visual, and commercial characteristics of lettering and to increase skills in the use of a wide variety of lettering and drawing tools. Activities should also be included which increase the students' abilties to use lettering to communicate to a specific audience and to plan and execute two dimensional designs with spatial impact.

189-10

Commercial Design (L)

Commercial Design should provide students with opportunities to survey the field of commercial art through a wide variety of problem-solving activities, including, but not limited to, producing graphic symbols, signs, and posters using design elements to communicate ideas and feelings.

189-15

Fashion Design (L)

Fashion Design should provide students with opportunities to study the role of fashion design historically and in contemporary society through the use of a wide variety of materials and problem-solving activities, including figure drawing, layout, and design.

189-20 Illustration (L)

Illustration should provide opportunities for students to increase their understanding of the role illustration plays in art and to explore a wide variety of methods, materials, and techniques used in the development of illustrations. Course activities include problem-solving experiences in commercial and creative illustration of books, advertisements, newspapers, and other printed materials.

189-25 Interior Design (L)

Interior Design should provide students with opportunities to increase understanding of the relationship of the elements and principles of design to interior spaces through a wide variety of problem-solving activities, including color study, scale model development, texture, and the organization and manipulation of the elements and principles of design.

189-30 Murals (L)

Murals should provide students with opportunities to understand the use of murals throughout the history of art as an architectural, political, and visual element within society. The unique aspects of mural-making, including experiences with perspective, scale, materials, construction, drawing, and theme should be provided through the development of student-initiated mural-making projects. Individual and group planning of projects should be included in the course.

Music

(9) MUSIC

Kindergarten - Creative Experiences 000-25

Music in kindergarten should provide sequential learning experiences based on the unique needs of students and the capabilities of the instructional staff, including opportunities for non-scheduled interaction and individualized instruction designed to explore the basic elements of music. Activities and experiences in music should be designed to help students develop abilities to: 1) discriminate with respect to the basic concepts of sound such as pitch, duration, loudness, and timbre; 2) use the voice to match pitches, chant rhymes and poems, and sing a wide variety of songs within a comfortable range; 3) develop a simple vocabulary to describe music; 4) create and improvise simple rhythmic and melodic patterns, song endings, and original melodies; 5) use environmental, instrumental, and body sounds to express ideas and moods; 6) identify and play appropriate percussion and melodic instruments, varying the pitch, tempo, loudness, and timbre in response to cues, and 7) use movement to demonstrate an understanding of musical concepts such as high/low, long/short, and loud/soft. These activities should utilize a wide variety of materials and experiences.

Grades 1-3 010-25, 020-25, 030,25

Music in grades 1-3 should provide sequential learning experiences based on the unique needs of students and the capabilities of the instructional staff, including opportunities for non-scheduled interaction and individualized activities designed to encourage interest in all of the arts. Activities and experiences in music should be designed to help students develop abilities to: 1) discriminate with respect to basic concepts of sound, such as pitch, duration, loudness, and timbre; 2) use a variety of songs in folk, art, patriotic, ethnic, and topical idioms; 3) notate and read basic symbols of pitch, rhythm, and dynamics; 4) improvise and create melodic, rhythmic, and harmonic ideas using a variety of pitch sets; 5) respond with appropriate body movements to a wide variety of musical elements, styles, and forms; 6) identify and play appropriate percussion, harmonic, and melodic instruments, and 7) develop the ability to listen with understanding, utilizing a vocabulary of descriptive and musical terms such as slow, loud, smooth, and phrase. These activities should utilize a wide variety of materials and experiences.

Instrumental classes in grades 1-3 should provide exploratory experiences on instruments such as the recorder, violin, and piano. Activities should develop the basic skills of tone production and provide a foundation for further study of technique and musicianship. Experiences should include improvising and playing by ear.

Grades 4-6 040-25, 050-25, 060-25

Music in grades 4-6 should provide sequential learning experiences based on the unique needs of students and the capabilities of the instructional staff, including opportunities for non-scheduled interaction and individualized activities designed to expand performing, organizing, and describing musical experiences. The instruction should be designed to help students develop abilities to: 1) discriminate and experiment with variations of tone, tempo, dynamics, and phrasing in traditional as well as electronic and media sound sources; 2) sing songs within a variety of historical and geographical perspectives emphasizing the use of part singing, ostinato, rounds, descants, and harmonization; 3) notate and read musical symbols in response to aurally presented tonal and rhythmic patterns; 4) improvise and create vocal and instrumental descants, harmony, and simple ostinato-type accompaniments to familiar songs; 5) develop a repertory of coordinated body movements to demonstrate an understanding of the elements of music, as well as use basic conducting patterns to lead classmates in performing music; 6) explore and perform on both orchestral and traditional folk instruments, and 7) develop the ability to listen with understanding utilizing technical and non-technical terms to identify, describe, and predict melodic and rhythmic organization, contour, texture, form, articulation, contrasts, characteristics of musical form, and expressive features. These activities should utilize a wide variety of materials and experiences.

Instrumental classes in grades 4-6 should provide beginning instruction in strings, woodwinds, brass, percussion, and keyboard instruments, as well as other instruments such as guitar and recorder. Activities should develop ensemble and solo skills such as posture, hand and body position, intonation, breathing, bowing, and fingering. Experiences in improvisation and playing by ear should be included in the course of study.

Grades 7-8 070-30, 080-30

Music in grades 7-8 should provide a number of diverse options including group and individual instruction, as well as music laboratory experiences based upon the unique needs of the student. Mini-courses or other short-term offerings may be considered in flexible sequences. Activities and experiences in music should be designed to develop students' abilities to: 1) refine the ability to read and use music notation; 2) use the voice as well as folk instruments to achieve a familiarity and understanding of music through performance; 3) compose and improvise musical examples in a wide variety of musical styles; 4) listen to, analyze, and study a variety of examples of electronic music; and 5) analyze and study the relationships among the fine arts or the humanities through the creation of illustrative art works. Instructional settings for these activities may include folk instrument classes, music listening laboratories, composition laboratories, electronic music laboratories, or interdisciplinary studies.

Instrumental classes in grades 7-8 should provide beginning and intermediate instruction in strings, woodwind, brass, percussion, and keyboard instruments as well as other instruments such as guitar and recorder. Activities should develop ensemble and solo skills such as posture, hand and body position, intonation, breathing, bowing and fingering. Experiences in improvisation and playing by ear should be included in the course of study.

(A) INSTRUMENTAL MUSIC COURSE TITLES

191-05 Band

Band should provide sequential and systematic learning activities including small group and individualized instruction designed to develop both a widely varied repertory and ensemble and solo performance skills. Activities and experiences should be designed to develop students' abilities to: 1) listen to, analyze, sight-read, conduct and study the literature performed as well as similar literature; 2) study the elements of music in varying contexts; 3) improvise, compose, and arrange music for the ensemble; 4) perform in a variety of small ensembles; 5) make interpretive decisions, and 6) perform with the ensemble in occasional public performances. These activities should utilize a wide variety of materials and experiences.

191-10 Instrumental Ensemble

Instrumental Ensemble should provide sequential and systematic learning activities including small group and individualized instruction designed to develop both a widely varied repertory and ensemble and solo performance skills. Activities and experiences may include jazz ensemble, stage band, jazz or studio orchestra, brass choir, woodwind choir, percussion ensemble, or instrumental chamber ensemble, and should be designed to develop students' abilities to: 1) listen to, analyze, sight-read, conduct and study the literature performed as well as similar literature; 2) study the elements of music in varying contexts; 3) improvise, compose and arrange music for the ensemble; 4) make interpretive decisions, and 5) perform with the ensemble in occasional public performances. These activities should utilize a wide variety of materials and experiences.

191-15 Jazz Ensemble

Jazz Ensemble should provide sequential learning activities including large group, small group and individualized instruction designed to develop both a widely varied repertory and ensemble and solo performance skills. Activities and experiences should be designed to develop students' abilities to: 1) listen to, analyze, sight-read, conduct, study and evaluate the literature performed as well as similar literature; 2) study the historical and idiomatic characteristics of a wide variety of musical styles including articulation, nuance and phrasing; 3) analyze the melodic, harmonic and rhythmic elements of improvisation; 4) improvise, compose, and arrange music for the ensemble; 5) perform in small ensembles of varying instrumentation; 6) make interpretive decisions, and 7) perform with the ensemble in occasional public performances. These activities should utilize a wide variety of materials and experiences.

191-20 Orchestra

Orchestra should provide sequential and systematic learning activities including small group and individualized instruction designed to develop both a widely varied repertory and ensemble and solo performance skills. Activities and experiences may include full orchestra with winds or string orchestra, and should be designed to develop students' abilities to: 1) listen to, analyze, sight-read, conduct and study the literature performed as well as similar literature; 2) study the elements of music in varying contexts; 3) improvise, compose and arrange music for the ensemble; 4) perform in a variety of small ensembles; 5) make interpretive decisions, and 6) perform with the ensemble in occasional public performances. These activities should utilize a wide variety of materials and experiences.

(B) VOCAL MUSIC COURSE TITLES

192-05 Choral Chamber Ensemble (L)

Choral Chamber Ensemble should provide sequential and systematic learning activities including small group and individualized instruction designed to develop both a widely varied repertory and ensemble and solo performance skills. Activities and experiences may include madrigals, vocal jazz ensemble, swing choir, or choral chamber ensemble, and should be designed to develop students' abilities to: 1) listen to, sight-read, conduct and study the literature performed as well as similar literature; 2) study the elements of music in varying contexts; 3) improvise, compose and arrange music for the ensemble; 4) make interpretive decisions, and 5) perform with the ensemble in occasional public performances. These activities should utilize a wide variety of materials and experiences.

192-10 Chorus (L)

Chorus should provide sequential and systematic learning activities including small group and individualized instruction designed to develop both a widely varied repertory and ensemble and solo performance skills. Activities and experiences may include boys' chorus, girls' chorus, or mixed chorus, and should be designed to develop students' abilities to: 1) listen to, analyze, sight-read, conduct and study the literature performed as well as similar literature; 2) study the elements of music in varying contexts; 3) improvise, compose and arrange music for the ensemble; 4) perform in a variety of small ensembles; 5)make interpretive decisions, and 6) perform with the ensemble in occasional public performances. These activities should utilize a wide variety of materials and experiences.

192-15 Vocal Jazz Ensemble (L)

Vocal Jazz Ensemble should provide sequential learning activities including large group, small group and individualized instruction designed to develop both a widely varied repertory and ensemble and solo performance skills. Activities and experiences should be designed to develop students' abilities to: 1) listen to, analyze, sight-read, conduct, study and evaluate the literature performed as well as similar literature; 2) study the historical and idiomatic characteristics of a wide variety of musical styles including vocal articulation, diction, nuance and phrasing; 3) analyze the melodic, harmonic, and rhythmic elements of improvisation; 4) improvise, compose and arrange music for the ensemble; 5) perform in small ensembles of varied scoring (SATF, SSA, SAB, etc.); 6) make interpretive decisions, and 7) perform with the ensemble in occasional public performances. These activities should utilize a wide variety of materials and experiences.

(C) OTHER MUSIC COURSE TITLES

193-05 Applied Music (L)

Applied Music should provide sequential learning activities including small group or individual instruction designed to develop individual performance skills. Beginning, intermediate or advanced instruction may include instruction on woodwind, brass, string, percussion, keyboard, voice, guitar, recorder, or other instruments. Activities and experiences should be designed to develop students' abilities to: 1) listen to, analyze, sight-read, conduct and study the literature performed as well as similar literature; 2) study the elements of music in varying contexts; 3) improvise, compose and arrange music for the individual; 4) make interpretive decisions, and 6) perform in occasional public performances. These activities should utilize a wide variety of materials and experiences.

193-10 Composition (L)

Composition should provide sequential learning activities designed to encourage the creation of original student works. Activities and experiences should be designed to develop students' abilities to: 1) compose original works in varied styles; 2) perform student works and works studied; 3) listen to, analyze and evaluate student works and exemplary works studied, and 4) study traditional and non-traditional music notation and sound sources as tools for musical composition. These activities should utilize a wide variety of materials and experiences.

193-15 Electronic Music (L)

Electronic Music should provide sequential learning activities designed to develop skills in the use of electronic media for musical composition and performance. Activities and experiences should be designed to develop students' abilities to: 1) listen to, analyze and study a wide variety of electronic music; 2) create and perform music using electronic media; 3) study the basic elements of music as derived from electronic sources; 4) study the basic components of synthesized sound including tone generation, filtering and mixing, and 5) evaluate new musical experiences containing electronic music utilizing critical listening skills. These activities should utilize a wide variety of materials and experiences.

193-20 Interdisciplinary Music Studies

Interdisciplinary Music Studies should provide sequential learning activities designed to explore the integration of the arts, humanities, and music with other disciplines. The instruction should be designed to develop students' abilities to: 1) analyze and study the relationships between music, other fine arts and other disciplines; 2) analyze and study the function of the arts or humanities in civilizations past and present; 3) create illustrative and experimental art works, and 4) perform examples of works in the various performing arts. These activities should utilize a wide variety of materials and experiences.

193-25 Keyboard (L)

Keyboard (including piano and organ) should provide sequential learning activities designed to develop keyboard performance skills. Activities and experiences should be designed to develop students' abilities to: 1) develop solo and ensemble performance skills such as posture, hand position, fingering, rhythm, articulation and scales; 2) compose and improvise melodic and harmonic material similar to the literature studied; 3) create and perform simple accompaniments to the literature studied; 4) listen to, analyze, sight-read, conduct and study the literature performed as well as similar literature; 5) study the elements of music in varying contexts, and 6) make interpretive decisions. These activities should utilize a wide variety of materials and experiences.

193-30 Music Appreciation

Music Appreciation should provide sequential learning activities designed to explore the nature of music, major musical style periods and the notation of music. Activities and experiences should be designed to develop students' abilities to: 1) read and interpret musical notation; 2) discuss the form, texture, historical period, cultural or aesthetic bases and compositional devices of the literature studied; 3) produce music alone and with others using the voice, environmental sounds, body sounds, electronic sounds, keyboard instruments and folk instruments; 4) create, arrange and improvise melodies and accompaniments in a variety of styles, and 5) evaluate new musical experiences utilizing critical listening skills. These activities should utilize a wide variety of materials and experiences.

193-35 Music Listening (L)

Music Listening should provide sequential learning activities designed to improve students' critical listening skills. The instruction should be designed to develop students' abilities to: 1) listen to, analyze and discuss music of a wide variety of styles and periods; 2) study the elements of music including melody, rhythm, harmony, form, texture and musical notation; 3) perform, create and improvise musical examples in varied styles; 4) analyze and evaluate new musical listening experiences based upon critical listening skills; 5) study the processes of sound technology including methods of recording, mixing, amplification and playback, and 6) evaluate the quality of available recordings and sound equipment for personal use. These activities should utilize a wide variety of materials and experiences.

193-40 Music Theater (L)

Music Theater should provide sequential learning activities designed to develop skills in music theater production. Activities and experiences should be designed to develop students' abilities to: 1) participate in staging direction and choreography of works studied and similar works; 2) listen to, analyze and study the works performed and similar works; 3) compose and stage original one-act and/or complete works for the class, school and public. These activities should utilize a wide variety of materials and experiences.

193-45 Music Theory (L)

Music Theory should provide sequential learning activities designed to develop skills in the description and analysis of musical and theoretical concepts. Activities and experiences should be designed to develop students' abilities to: 1) develop ear training skills; 2) compose examples and short works to illustrate the principles studied; 3) perform examples of student works or a variety of idioms. These activities should encompass a wide variety of materials and experiences.